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system, Method and Apparatus providing collateral information for  
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of the attached claims.

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S11	15330	(IDENTIF? OR RECOGNIZ? OR DISTINGUISH?) (3N) (TOPIC? OR ITEM OR ITEMS OR KEYWORD? OR WORD OR WORDS OR TERM? OR DESCRIPTOR? ? OR SUBJECT () HEADING?)
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S13	4486	S3 AND S4 AND S2
S14	17670	S6 (S) S7 (S) S8
S15	40990	S9 AND S10 AND S5
S16	1934	S11 AND S8
S17	0	S12 AND S13 AND S14 AND S15 AND S16
S18	7	S12 AND S13
S19	2	S12 AND S14
S20	5	S12 AND S15
S21	0	S12 AND S16
S22	24	S13 AND S14
S23	70	S13 AND S15
S24	0	S23 AND S16
S25	6	S13 AND S16
S26	1	S23 AND S14
S27	43	S18 OR S19 OR S20 OR S22 OR S25 OR S26
S28	13	S27 AND IC=G06F?
S29	30	S27 NOT S28
S30	7	S1 AND S2 AND S3 AND S4
S31	542	S2 AND S3 AND S4 AND S8
S32	111932	S10 (2N) S5
S33	22	S31 AND S32
S34	0	S33 AND S11
S35	6	S31 AND S11
S36	28	S33 OR S35

File 347:JAPIO Nov 1976-2004/Mar (Updated 040708)

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File 350:Derwent WPIX 1963-2004/UD,UM &UP=200445

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36/5/3 (Item 3 from file: 347)  
DIALOG(R) File 347:JAPIO  
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06650722 \*\*Image available\*\*  
DYNAMIC IMAGE DECODING DEVICE/METHOD

PUB. NO.: 2000-236540 [JP 2000236540 A]  
PUBLISHED: August 29, 2000 (20000829)  
INVENTOR(s): SEKIGUCHI SHUNICHI  
ISU YOSHIMI  
ASAII KOTARO  
OGAWA FUMINOBU  
HASEGAWA YURI  
APPLICANT(s): MITSUBISHI ELECTRIC CORP  
APPL. NO.: 11-037621 [JP 9937621]  
FILED: February 16, 1999 (19990216)  
INTL CLASS: H04N-007/24

#### ABSTRACT

PROBLEM TO BE SOLVED: To minimize degradation of picture quality due to an error by completing decoding without **detecting** the error of encoding data by means of a decoding means and setting the head position of encoding data following next encoding data to a re-synchronous point when an investigation means **detects** the **occurrence** of discontinuity.

SOLUTION: A start code **detection** part 2 **detects** the start point of the high- **order** layer of **video** **data** and **sends** a bit stream to a syntax analysis part 3 with a layer indication signal. The syntax analysis part 3 analyzes layer data indicated by the layer indication signal and **extracts** encoding **data**. If a video packet header cannot normally be **detected** when a system reaches the terminal of a present video packet, for example, a re-synchronous point decision part 4 decides the video packet header appearing next to be a re- synchronous point and informs the start code **detection** part 2 of it with a re-synchronous point indication signal. Then, the system returns to normal decoding from the video packet header which is **detected** at the earliest time.

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36/5/6 (Item 6 from file: 347)  
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05768379 \*\*Image available\*\*  
DIGITAL TRANSMISSION NETWORK

PUB. NO.: 10-051479 [JP 10051479 A]  
PUBLISHED: February 20, 1998 (19980220)  
INVENTOR(s): HISATOMI HIROYUKI  
ASAHIKA TAKASHI  
HIRONO MASARU  
MURATA NORIO  
APPLICANT(s): HITACHI DENSHI LTD [000542] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 08-203534 [JP 96203534]  
FILED: August 01, 1996 (19960801)  
INTL CLASS: [6] H04L-012/437; H04B-010/20; H04B-010/08; H04N-007/18  
JAPIO CLASS: 44.3 (COMMUNICATION -- Telegraphy); 44.2 (COMMUNICATION -- Transmission Systems); 44.6 (COMMUNICATION -- Television)  
JAPIO KEYWORD:R012 (OPTICAL FIBERS)

#### ABSTRACT

PROBLEM TO BE SOLVED: To ensure the **transmission** of **information**, secure reliability, availability, and maintainability by a single loop, and lower the cost by disconnecting a local terminal from a network and bypassing it

when the terminal device gets out of **order** .

SOLUTION: A terminal device 20 in a digital transmission network inserts and **extracts** a **video** signal and an audio signal into and from a reference signal inputted from an optical cable 421 through specific processes and sends the reference signal out to a next terminal device. At this time, if a frame synchronizing signal can not be received, a line control circuit 215 **detects** whether or not there is light input, judges that its device is faulty when the input is normal, and sends a fault signal out for a certain period and then passes **transmit data** through a bypass circuit 212. Consequently, when the network is constituted with a single loop, the network is maintained in the case of fault **occurrence** and a center device can specify a faulty terminal. Therefore, the constitution is simplified by adopting the single loop to constitute the network at low cost.

36/5/7 (Item 7 from file: 347)  
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05450041 \*\*Image available\*\*

#### SDH INTERFACE TRANSMISSION CIRCUIT AND SDH INTERFACE RECEPTION CIRCUIT

PUB. NO.: 09-064841 [JP 9064841 A]  
PUBLISHED: March 07, 1997 (19970307)  
INVENTOR(s): TANIGUCHI TERUTAKA  
OKADA KAZUYASU  
YAMAGUCHI YUTAKA  
OTA ATSUSHI  
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)  
NIPPON TELEGR & TELEPH CORP <NTT> [000422] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 07-218776 [JP 95218776]  
FILED: August 28, 1995 (19950828)  
INTL CLASS: [6] H04J-003/00; H04B-007/212; H04L-007/00  
JAPIO CLASS: 44.2 (COMMUNICATION -- Transmission Systems); 34.4 (SPACE DEVELOPMENT -- Communication); 44.3 (COMMUNICATION -- Telegraphy

#### ABSTRACT

PROBLEM TO BE SOLVED: To reduce the circuit scale by providing an SOH, POS addition means, an H4 counter, and a VC assembly means to the circuit and relaying data received from a satellite channel to a ground channel network as SDH **transmission data** .

SOLUTION: A receiver side demodulates **transmission data** received from a satellite channel, a **data extract** section 11 **detects** a prescribed bit of a unique word in **transmission data** and an error correction code or the like and **extracts** succeeding **reception data** to the **bit** from a head because the data are burst data. On the other hand, an H4 counter 14 generates H4 bytes synchronously with the burst data and gives the data to a VC assembly section 5. The assembly section 5 inserts the H4 bytes to **data extracted** by the **data extract** section 11 in the **order** of multi-frames to assemble a virtual container of a VC-3. A POH is added to a container containing the data, and an SOH is added by an SOH addition section 7, and the result is relayed to a ground network as an STM-1 signal. The data are sent as burst data in the satellite channel.

36/5/9 (Item 9 from file: 347)  
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05288808 \*\*Image available\*\*  
IMAGE PROCESSING DEVICE

PUB. NO.: 08-244308 [JP 8244308 A]  
PUBLISHED: September 24, 1996 (19960924)  
INVENTOR(s): TAGAWA MASATOSHI  
APPLICANT(s): FUJI XEROX CO LTD [359761] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 07-052539 [JP 9552539]  
FILED: March 13, 1995 (19950313)  
INTL CLASS: [6] B41J-021/00; G06F-012/00; H04N-001/21; H04N-001/387  
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines); 44.7 (COMMUNICATION -- Facsimile); 45.2 (INFORMATION PROCESSING -- Memory Units)  
JAPIO KEYWORD: R131 (INFORMATION PROCESSING -- Microcomputers & Microprocessors)

#### ABSTRACT

PURPOSE: To reduce cost by processing data with a composite function at high speed and minimizing the capacity of memory for image data.  
CONSTITUTION: Print data from a host device is first received by a print data receiving part 20 and then is divided into band lists by a division means 21. A scheduling means 22 **determines** a **development order** by which the divided print data is developed into **bit map data** and a **development** area into page memory. Next, a means for developing **data** by **segment** unit develops the divided print **data** into **bit map data** based on schedule information or allocation information, and stores the developed **bit map data** in page memory. In addition, an image transfer means 24 transfers the **bit map data** stored in page memory sequentially to a printing mechanism part 25 by segment unit. The printing mechanism part 25 actually prints the **bit map data**.

36/5/13 (Item 13 from file: 347)

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03264267 \*\*Image available\*\*

FACSIMILE BROADCAST RECEIVER AND COMMON USE TYPE FACSIMILE RECEIVER

PUB. NO.: 02-239767 [JP 2239767 A]  
PUBLISHED: September 21, 1990 (19900921)  
INVENTOR(s): SENOO HIROSHI  
MISONOO ISAMU  
TAKADA MASAYUKI  
APPLICANT(s): NIPPON HOSO KYOKAI <NHK> [000435] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 01-059544 [JP 8959544]  
FILED: March 14, 1989 (19890314)  
INTL CLASS: [5] H04N-001/00; H04N-007/08  
JAPIO CLASS: 44.7 (COMMUNICATION -- Facsimile); 34.4 (SPACE DEVELOPMENT -- Communication); 44.6 (COMMUNICATION -- Television)  
JOURNAL: Section: E, Section No. 1011, Vol. 14, No. 557, Pg. 94, December 11, 1990 (19901211)

#### ABSTRACT

PURPOSE: To surely **receive** facsimile **information** sent through plural television channels and plural media by providing a program reservation means, a means discriminating priority, a facsimile broadcast reception means and variable means of priority.

CONSTITUTION: A channel through which facsimile broadcast is implemented is **detected**, a reception **order** discrimination section 21 outputs a channel setting signal X to a television tuner section 20 and a satellite broadcast tuner section 12, a facsimile channel demodulation section 11 demodulates a signal B to **detect** all channels through which facsimile broadcast is implemented by ground system television broadcast and satellite broadcast, stores a channel number and the reception **order** discrimination section 21 outputs a channel setting signal X to a tuner section and the facsimile

channel demodulation section 11, the data channel demodulation section and a data **classification** section 14 **separate** the **information** .

Set	Items	Description
S1	21637	(COLLATERAL OR SUPPORT? OR CONTRIBUTORY OR ACCESSORY OR ASSISTANT OR AUXILIARY OR SUBSIDIARY) () (INFORMATION OR DATA)
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S13	4870	S3 (S) S4 (S) S2
S14	17618	S6 (S) S7 (S) S8
S15	96009	S9 (S) S10 (S) S5
S16	6690	S11 (S) S8
S17	0	S12 (S) S13 (S) S14 (S) S15 (S) S16
S18	16	S12 (S) S13
S19	0	S12 (S) S14
S20	5	S12 (S) S15
S21	1	S12 (S) S16
S22	40	S13 (S) S14
S23	211	S13 (S) S15
S24	0	S23 (S) S16
S25	1	S22 (S) S16
S26	6	S23 (S) S14
S27	59	S18 OR S20 OR S21 OR S22 OR S25 OR S26
S28	40	S27 NOT PY>2000
S29	27	S28 NOT PD>20000331
S30	26	RD (unique items)
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DIALOG(R)File 2:INSPEC

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6616135 INSPEC Abstract Number: B2000-07-6130C-010, C2000-07-1250C-019

**Title: Ultra low bit rate voice coding**

Author(s): Ovens, M.J.; Ponting, K.M.; Turner, M.E.

Author Affiliation: 20/20 Speech Ltd., Great Malvern, UK

Conference Title: IEE Seminar on Speech Coding Algorithms for Radio Channels (Ref. No.00/012) p.9/1-15

Publisher: IEE, London, UK

Publication Date: 2000 Country of Publication: UK 116 pp.

Material Identity Number: XX-2000-01274

Conference Title: IEE Seminar on Speech Coding Algorithms for Radio Channels (Ref. No.00/012)

Conference Sponsor: IEE

Conference Date: 17 April 2000 Conference Location: London, UK

Language: English Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P); Theoretical (T); Experimental (X)

Abstract: High frequency (HF) radio is used for long haul or extended range communications in many situations. Under stressed HF channel conditions, the **supportable** data rate falls below that required by existing low bit rate speech coding algorithms. This paper presents research undertaken at DERA Malvern on the development of a real-time speech coding system which utilises **automatic** speech **recognition** (ASR) and synthesis technologies to achieve speech coding at **data** rates below 300 bps. A continuous speech **recogniser** is used to transcribe incoming speech as a sequence of sub-word units, termed acoustic **segments**. Prosodic **information** (pitch and duration) is combined with **segment** identity to form a serial **data** **stream** suitable for transmission. A parallel formant speech synthesiser is used to synthesise the speech at the receiver, using models trained to a particular talker's **voice** to establish talker characteristics. (9 Refs)

Subfile: B C

Descriptors: radiocommunication; speech coding; speech recognition; speech synthesis

Identifiers: ultra low bit rate voice coding; high frequency radio; HF radio; long haul communications; extended range communications; stressed HF channel conditions; data rate; low bit rate speech coding algorithms; research; DERA Malvern; real-time speech coding system; automatic speech recognition; automatic speech synthesis; data rates; continuous speech recogniser; sub-word units; acoustic segments; prosodic information; pitch; duration; serial data stream; parallel formant speech synthesiser; talker voice trained model; talker characteristics

Class Codes: B6130C (Speech and audio coding); B6250 (Radio links and equipment); B6130E (Speech recognition and synthesis); C1250C (Speech recognition); C5260S (Speech processing techniques)

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2015247 NTIS Accession Number: AD-M000 734/4

**Joint Technical Architecture (Version 1.0) (on Diskette)**

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Defense Information Systems Agency, Reston, VA. Joint Interoperability Engineering Organization.

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Aug 96 1 diskette

Languages: English

Journal Announcement: GRAI9721

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role for each instrument and to assess how they can aid each other in establishing an improved output product.

Descriptors: \*Data transmission; \*Geology; \*Local area networks; \*Onboard data processing; \*Real time operation; \*Remote sensing; Damage assessment; Disasters; Impact damage; Information systems; Remote sensors

Identifiers: NTISNASA

Section Headings: 48F (Natural Resources and Earth Sciences--Geology and Geophysics); 48C (Natural Resources and Earth Sciences--Natural Resource Surveys); 91I (Urban and Regional Technology and Development--Emergency Services and Planning); 43D (Problem Solving Information for State and Local Governments--Police, Fire, and Emergency Services)

**30/5/9 (Item 1 from file: 35)**

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01661979 ORDER NO: AAD99-00691

**OPTIMAL SCHEDULING OF CDMA SYSTEMS (CELLULAR PHONES, WIRELESS TRANSMISSION, QUALITY OF SERVICE)**

Author: RAMAKRISHNA, SUDHIR

Degree: PH.D.

Year: 1998

Corporate Source/Institution: RUTGERS THE STATE UNIVERSITY OF NEW JERSEY  
- NEW BRUNSWICK (0190)

Director: JACK M. HOLTZMAN

Source: VOLUME 59/08-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 4347. 109 PAGES

Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL ; ENGINEERING,  
SYSTEM SCIENCE

Descriptor Codes: 0544; 0790

Present cellular systems have mainly been designed to allow mobile users to interface to fixed telephone networks, and hence, have primarily been optimized for **voice transmission**. Future wireless systems, however, will be required to **support data** (i.e., non-voice) sources with a variety of rates and quality-of-service requirements. In this thesis, we attempt to enhance the efficiency of conventional CDMA systems with respect to the throughputs provided, with an emphasis on data sources. The basic approach followed in **order** to do so is to exploit the property of delay tolerance that is a characteristic of many such sources. The simplest case, namely, the uplink of a CDMA system with two user classes is considered. One of the classes consists of delay intolerant users requiring support for a constant **information bit** rate. The other class consists of delay tolerant users needing support for an **information bit** rate larger than a specified value. Both classes have certain respective quality of service (QOS) specifications. Certain common synchronization requirements are imposed on all the users. The objective is to maximize the throughput of the delay tolerant users, while meeting the QOS requirements of all the users. Starting from the constraints defining a conventional CDMA system, we propose a modification wherein the transmissions of the delay tolerant users are scheduled, so that only a limited number of them are transmitting information at any given time instant. It is shown that the proposed transmission scheme, which tends, in a special case, towards hybrid CDMA/TDMA for the delay tolerant users, provides throughput gains as compared to conventional CDMA under many conditions. These conditions are **identified** in **terms** of the various system parameters. It is also shown that the proposed transmission scheme imposes the same or lesser average transmit power requirements, and in cases of practical interest, identical peak power requirements, as compared to conventional CDMA.

The basic scheme is extended to include constraints on the inter-cell interference. A general result that follows is that given a set of delay tolerant users with certain (average and peak) power constraints, and certain inter-cell interference constraints, the per-user throughput may be maximized by time-scheduling a certain subset of the users. The behavior of the scheme in the presence of system imperfections, such as imperfect power control, is also investigated. Implementation issues and strategies, given

knowledge of certain system parameters, are indicated.

Set	Items	Description
S1	21637	(COLLATERAL OR SUPPORT? OR CONTRIBUTORY OR ACCESSORY OR ASSISTANT OR AUXILIARY OR SUBSIDIARY) () (INFORMATION OR DATA)
S2	333307	(AUDIO OR DATA OR INFORMATION OR MEDIA OR VOICE OR VIDEO OR MULTIMEDIA) (2N) (STREAM? OR BIT OR BITS OR SEND? OR RECEIVE OR TRANSMIT OR TRANSMISSION OR PATH OR RECEPTION)
S3	11740522	RECOGNI? OR DETECT? OR DETERMIN? OR ACKNOWLEDG? OR VERIF? - OR AUTHENTICAT? OR VALIDAT?
S4	7013255	EVENT? OR HAPPENING? OR INCIDENT? OR OCCURRENCE? OR DEVELOPMENT? OR EPISODE?
S5	16710315	TEXT OR DATA OR DOCUMENT? OR INFORMATION OR CONTENT? OR PHOTO OR PHOTOS OR PHOTOGRAPH? OR PICTURE? OR AUDIO? OR SOUND? - OR VIDEO? OR MULTIMEDIA OR MULTI()MEDIA OR MEDIA OR VOICE OR - IMAGE?
S6	21177827	(ONE OR MORE OR TWO OR MULTIPLE OR MANY OR PLURAL? OR NUMEROUS OR SEVERAL OR GLOBAL OR UNIVERSAL)
S7	518080	PREDETERMIN? OR PREDECID? OR PREESTABLISH? OR PREDESTIN? OR PREORDAIN? OR FORECAST? OR FOREORDAIN?
S8	6948056	TAXONOMIES OR HIERARCHICAL OR RANK? OR STANDING OR ARRANGEMENT? OR CLASSIFICATION OR CATEGORI? OR ORDER? OR COLLECTION?
S9	1812600	AUTOMATIC? OR AUTOMATE? OR SPONTANEOUS? OR INSTINCTIVE?
S10	6473585	EXTRACT? OR PARSE? OR PARSING OR MAPPING OR MAPPED OR MAPS OR BREAKOUT OR BREAK()OUT OR ENUMERAT? OR SEPARATE? OR ORGANIZ? OR ORGANIS? OR FRAGMENT? OR CHUNK? OR SEGMENT?
S11	41675	(IDENTIF? OR RECOGNIZ? OR DISTINGUISH?) (3N) (TOPIC? OR ITEM OR ITEMS OR KEYWORD? OR WORD OR WORDS OR TERM? OR DESCRIPTOR? ? OR SUBJECT()HEADING?)
S12	815	S1 (S) S2
S13	4870	S3 (S) S4 (S) S2
S14	17618	S6 (S) S7 (S) S8
S15	96009	S9 (S) S10 (S) S5
S16	6690	S11 (S) S8
S17	0	S12 (S) S13 (S) S14 (S) S15 (S) S16
S18	16	S12 (S) S13
S19	0	S12 (S) S14
S20	5	S12 (S) S15
S21	1	S12 (S) S16
S22	40	S13 (S) S14
S23	211	S13 (S) S15
S24	0	S23 (S) S16
S25	1	S22 (S) S16
S26	6	S23 (S) S14
S27	59	S18 OR S20 OR S21 OR S22 OR S25 OR S26
S28	40	S27 NOT PY>2000
S29	27	S28 NOT PD>20000331
S30	26	RD (unique items)
S31	38	S2 AND S7 AND S8 AND S10 AND S11
S32	29	S31 NOT PY>2000
S33	29	S32 NOT PD>20000331
S34	29	RD (unique items)
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(c) 1998 Inst for Sci Info  
File 647:CMP Computer Fulltext 1988-2004/Jul W2  
(c) 2004 CMP Media, LLC  
File 674:Computer News Fulltext 1989-2004/Jun W4  
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File 696:DIALOG Telecom. Newsletters 1995-2004/Jul 19  
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02363089 SUPPLIER NUMBER: 58545238 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
The Answer Machine. (information services management) (Industry Trend or

Event)

Feldman, Susan

Searcher: The Magazine for Database Professionals, 8, 1, 58

Jan, 2000

ISSN: 1070-4795 LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 13252 LINE COUNT: 01042

GEOGRAPHIC CODES/NAMES: 1USA United States

DESCRIPTORS: Information services industry; Database access software; DBMS; Document processing system

EVENT CODES/NAMES: 360 Services information

PRODUCT/INDUSTRY NAMES: 7375000 (Database Providers); 4811520 (Online Services); 7372421 (DBMS); 3573025 (Document Processing Computer Systems)

NAICS CODES: 514191 On-Line Information Services; 51121 Software Publishers; 334111 Electronic Computer Manufacturing

FILE SEGMENT: TI File 148

... design, linguistics, computer science, and library science, each system with its own unique perspective on how to **organize**, find, and use information effectively.

The growth of corporate intranets adds to the demand. Companies are willing...

...Today's document retrieval systems lump all information needs into a single process. New information tools will **separate** these different needs into **categories** and provide specific tools for each kind of need.

Here are some of these search types:

\* Broad...

...returned will at best intersect that need spottily. Today's information sys terms require the searcher to **extract** terms that have the best chance of representing the question, while at the same time, eliminating extraneous...are already in development. Answer machines will become the technical underpinnings of knowledge management systems, providing single, **organized**, easy access to all the information in an. **organization** including the following:

\* Internal documents and databases in a variety of formats

\* Committee reports

\* External sources

\* Directories of people and skills

\* Tools to manipulate information and **extract** new knowledge

The trick will be to select the appropriate tools and then to present them as...

...whole: a new model for a information system that brings together all of the resources of an **organization** in any format.

If you approach your information system as a whole, then you will implement each new technology as a brick within an entire edifice. You could implement each technology **separately**, but ultimately, integration, of these technologies will create a knowledge management system arid even a decision support...

...not appear very frequently in documents not "about" that subject. This is the rudimentary idea behind relevance **ranking** in retrieval, systems.

Clusters of certain terms are even better indicators, that a document is about a...

...the term is in the whole database -- how many times it appears in every document in the **collection**. Rare terms ...for that document. Then it compares all, the scores and presents the highest first. This is relevance

**ranking** in a nutshell.

Statistics and patterns enter into advanced retrieval systems in a number of other contexts. For instance, in **order** to determine whether a document matches a query, the system must calculate the similarity of the document...

...these angles to give us a degree of similarity. This "vector space model" can help calculate relevance **ranking**, but it can also determine clusters or clumps of similar documents. This is the basis for most of the star **maps** or imaginary. Landscape visualizations used to display the contents of a database, or a retrieved set of...

...a very minor concept expressed in a rare term, then the rare term may skew the relevance **ranking**, since it has a higher, weight than the common term.

Remember also that statistical systems do not...

...with other environmental terms, if a query is more than one word long, a statistical system would **rank** such a false drop low. Hence, search engines look very stupid by making errors that any human...

...the terms being retrieved is not part of the equation for statistical processing.

Natural-Language Processing

In **order** to build a state-of-the-art information system, one must **extract** as much meaning as possible from each document. A list of words, or even words and phrases...

...and dissolve ambiguities. A good natural-language-based system provides the foundation for this system, because it **parses** sentences thoroughly, **extracts** meaning from context, and is smart enough to realize that if the year is 1999, Hilary Rodham Clinton and the first lady are the same person. A document-processing tool is required that can **extract** and store many layers of meaning, as well as automatically **categorizing** documents and identifying all variants of proper names. Each unit of meaning may also carry a time...

...on which someone added the document to the database. With relevant dates in place, later tools can **extract** automatically chronologies of events. Chronological information also enables the system to distinguish between first ladies Barbara Bush...

...time and context of the question. The information in the knowledge base should also be retrievable as **separate** units, such as a single sentence or paragraph, if we want it to supply direct answers to questions.

I stress this knowledge base building step because most **organizations** will not willingly invest the money, time, and effort needed to design a knowledge base more than...

...few years. Any future advanced information tool will operate on the contents of this knowledge base. Therefore, **extracting** as much knowledge as possible should increase the flexibility in the future to adopt new technologies, as...

...it when needed. This is the same principle that advises digitizing at a high resolution when scanning **collections** : Build the foundation ... present. While NLP systems match terms, Las both Boolean and statistical search engines do, the systems also **extract** meaning from syntax, built-in lexicons, context, and even the structure of the text itself. This is...

...today. Interactions with today's systems are fixed in time. The searcher must change a query in **order** to find documents not already retrieved and to add new indexing terms manually. We need systems that...

...agents. and with the user. Agents may be mobile, traveling along the Internet or other networks in **order** to carry out various tasks, such as finding or delivering information, **ordering** books, or monitoring events.

Most importantly, agents can alter their behavior to fit a new situation.

They...

...adapt to our preferences for formats or other repetitive actions we take -- like opening applications in certain **orders** or checking e-mail at a certain time of day -- and will perform these tasks automatically.

Eventually...

...distinct area of research with tools in development or, in some cases, already on the market.

Concept **Extraction** and **Mapping**

Concept **mapping** is the key to many new technologies on the horizon. Language provides rich alternatives in how an...to interpret meaning correctly and to relate similar expressions of an idea to the same concept.

Concept **mapping** enables us to:

\* Search across disciplines using different vocabularies to express the same idea.

\* Search across languages...

...a name or place, no matter how a question is phrased.

\* Index materials automatically.

Concept and vocabulary **mapping** are like creating a controlled vocabulary. In a controlled vocabulary, all synonyms are identified and one is chosen as the "official" term. Other terms cross reference to that official term. Concept **mapping** works in a similar manner, except that the concept does not need to be a single chosen...

...in any other language and well beyond the conceptual grasp of multilingual human dictionaries or thesauri.

Vocabulary **mapping**, a form of this technique, enables a searcher using MESH terms in MEDLINE to search intelligently in...

...another medical database with a different thesaurus in control. Thus, the idea of "tree" has multiple terms **mapped** to it, as shown below in Figure 3.

This is a technology already in place with varying...

...areas.

Machine-Aided and Automatic Indexing

Machine-aided or automatic indexing (MAI) finds major concepts in texts, **maps** them to an internal thesaurus or controlled vocabulary, and applies indexing terms automatically. It may also **extract** important names, disambiguate **words**, and **identify** new **terminology** for indexers to add to the system. MAI offers candidate terms to indexers for their approval. Automatic...

...automatically assign broad terms to all documents for its customer folders. Autonomy uses machine learning to automatically **categorize** materials, and Semio creates **taxonomies** or hierarchies automatically. Systems such as DR-LINK, developed by Dr. Elizabeth Liddy at Syracuse University, assign subject codes in **order** to disambiguate words. Some MAI systems work with up to 80 percent accuracy, which compares favorably with manual indexing.

Some experimental approaches use probability and statistics to **categorize** materials. Muscat, now owned by Dialog, is a good example of this approach. Others are experimenting with neural networks for automatic **classification**.

MAI systems can also **extract** important names from the text or "disambiguate" terms. Consider the term "bank." It may be a place...

...or railroad. Increasingly Web and other search engines use automatic indexing to disambiguate or to create broad **categories** for browsing.

MAI can speed up the indexing and abstracting process needed to prepare databases. It particularly...

...have this potential. There are two kinds of automatic summarization. The first summarizes whole documents, either by **extracting** important sentences or by rephrasing and shortening the original text. Most

summarization tools currently under development **extract** key passages or topic sentences, rather than rephrasing the document. Rephrasing is a much more difficult task...

...interest. Two approaches are in development. The first translates text from one language to another. The second **maps** words in the same language to a single coded concept, just as concept **mapping** does. Even rough wording or poor translation is adequate for cross-language retrieval. We can also use...

...retrieving foreign language documents, even if we can't translate the documents perfectly. The combination of concept **mapping** and automatic summarization can deliver a rough gloss or overview of an article so that a researcher can decide whether to read an entire document.

#### Entity Extraction

Entities are names of people, places or things. As we all know, entities are often difficult to locate within a **collection** of documents because many variant terms may refer to the same person. For instance, "AT&T" may...names or terms as they occur in new materials. NetOwl is one example of a product that **extracts** entities. For decades, LEXIS-NEXIS has used name variants in **order** to improve retrieval, but automated **extraction** and storage give this policy far more power.

#### Relationship Extraction

With **extracted** entities in hand, one can perform some interesting analyses across documents. For instance, one could find out who has met with whom over the timer period of the **collection**. This kind of data analysis requires that the system **extract** relationships among entities. Some systems can **extract** more than 60 different types of relationships, including some that describe time or tense and numbers. Natural language researchers have developed **categories** to describe these relationships. For instance.

\* The ISA relationship defines who or what the subject is: "Gil..."

...the Southern Hemisphere causes severe sunburns."

Tools like KNOW-IT, developed by Woojin Paik of Solutions United, **extract** entities and store their relationships to each other. This involves a larger **chunk** of information than single words or even phrases, consisting of the subject, the object, and the kind...

...this can answer questions such as, "Who fired the president of Consolidated Widget Company?"

#### Chronological and Numeric Extractions

If a system can determine when and what event Was happened, or howlarge something is compared to...

...the Widget companies that produce -more than 5 million widgets a year." With this kind of information **extracted** from its contents, the system can also construct chronologies of events. This may not seem earth shaking...

...In other words, text mining, looks at the whole database, not just a single document, and then **extracts** information from all the pertinent documents in **order** to reveal patterns over time or within a subject. These technologies perform some analysis on text in...

...the knowledge base on which it operates. If relationships, concepts, chronological information, and entities have already been **extracted**, then, the text-mining process can take advantage of this information and seek patterns within it.

Question...

...Accord, which may or may not contain the answer. Question-answering systems find the best matching answers **extracted** from within matching documents. If users need more information, they can link to the source documents.

Filtering...

...looks for new documents of interest. To set up a filter, the user creates, a profile or " **standing** query," which runs against any new

additions to the database. The art of designing a **standing** query lies in creating a broad enough query to prevent the omission of important developments, while making...

...A search engine that can provide well-focused retrieval, preferably using some sort of disambiguation and concept **extraction**, will most likely catch related topics.

One of the major problems with any kind of **standing**, continuing query, or monitoring service is that the terminology in any field changes over time. So do...Filtering tools that incorporate machine learning can detect new terms and offer to add them to a **standing** query. They can also, note changes in the user's interests and adapt the query to fit...

...people sitting under a tree at a picnic to reading a description of the same. scene. In **order** to help people interpret large sets of data or documents, many researchers are designing visual equivalents of...

...a standard screen, but it contains all the elements that a user would want to have in **order** to interact well with an information system. It displays documents, related concepts, and key Phrases, all in...

...experts, and computer scientists need more than the anecdotal information we get front us-ability tests in **order** to establish guide-lines for, good design. We do know that people have many different cognitive styles...

...a system. While the interface determines how the information displays, what it displays depends on the data **extracted**. Thus, relevance **rankings** easily display as bar charts. The amount of information available on a topic can show as a...

...of subject content. It can create star charts, showing clusters of documents, or the imaginary land-form **maps** from Cartia). Look at this visualization of a set of search results from Cartia in Figure 6...

...draft11/daveloc4.html) at the University of Maryland gives an instant overview of the Library of Congress **collections**. As you pass your mouse over each timeline, it turns blue, and so do the types of **collections** that contain information about that time period.

Query formulation is one of the weakest spots in the...

...8 below) and Dotfire, its newest form, are dynamic query tools. These tools present a set of **categories** that help to narrow down a ...the technical paper by Ben Shneiderman, David Feldman, and Anne Rose, "Visualizing Digital

Library Search Results with **Categorical** and **Hierarchical** Axes," CS-TR-3992, UMIACS-TR-99-12, February 1999, <ftp://ftp.cs.umd.edu/pub/hcil> ...

...box shows the user, at a glance, the number of tours that exist in each of the **categories** requested during the time period indicated For instance, 87 canoeing tours are offered during a specific time...

...discover patterns.

Northern Lights custom folders give you a quick visual overview of search results The careful **categorization** of contents makes searching Northern Light both broad and well focused. Northern Light also searches Yahoo! directory...

...We need to read what we find, but we also need to merge sources, pull them apart, **separate** the data, into **categories**, sort the data, seek patterns, and **send** the **information** to colleagues and clients.

Puffin Search (<http://www.puffin-ware.com>) invites this kind of interaction. It...

...any cell in the table as a basis for comparison. Choose a title and it will re- **rank** all other hits by their similarity to that title. Or, choose several of the keywords and **rank** all 1,200 hits by the terms you have chosen. You can sort by search engine or...

...<http://www.hci.cornell.edu/projects/projs/multimedia.htm>:

Netbook allows users to capture images from digital **collections**, store, and view them on a user's personal netbook page. Thumbnails of images can be **organized**, allowing users to build a manageable **collection**.

Annotator allows users to annotate or read annotations to images that have been taken from an online **collection** or a Netbook. A class of students for example can view the annotations an instructor has made to an image or create their own annotations visible to their classmates.

Authoring helps users manipulate, **organize**, and display research and data with **hierarchical** and hypermedia links. Students can view the work of others and **organize** and make their own links.

Artview transforms online image **collections** from museums and other sites into collaborative learning spaces. At the same time but from different locations...

...each other using a shared text window.

#### Searching Multiple Sources Simultaneously

Searching across different kinds of information **collections** poses one of the biggest challenges facing digital library and intranet builders.

**Collections** may encompass text or images or statistics. Text files may contain bibliographic records, abstracts, or full text. Image **collections** may only offer search engines the text appearing as captions. Once we move outside of controlled, integrated **collections** of the same kind of Materials, we encounter several obstacles. These include vocabulary differences, differences in type of materials, and differences in relevance- **ranking** algorithms.

Differences in vocabulary are a familiar problem to any experienced searcher; Each **collection** or source may use different terms to express the same idea. We professional searchers traditionally handle this...One could imagine trying to tweak a search system each time it adds a new kind of **collection**.

Searching across several systems complicates matters still further. Most search engines calculate the relevancy of a document...

...in part by finding out how rarely that term occurs in the database as a whole, and **collection** contains different materials, it is unlikely that what is highly relevant in one **collection** will **rank** the same way in another. Data fusion is a set of techniques for establishing a common ground...

...why Searching across files in Dialog or metasearching on the Web doesn't work well within relevance- **ranking** systems.

Here's an example. Suppose that: we decide to search for a few good articles on...

...Engine 2 concentrates on sports. Search Engine 1 finds 250,000 articles about high blood pressure. It **ranks** them. Search Engine 2 finds 10 articles, and they have only minimal information on the subject. Think...

...it gets a high weight. SO, Search Engine 2 gives all of these documents a 98 percent **ranking**. Since high blood pressure constitutes a common term in Search Engine 1, it gets a lower weight...

...systems. One technique takes one document from each in a round-robin approach. Another creates a virtual **collection** that merges all the documents found in all the databases. Then weights are reassigned based on this common **collection**. The second technique gives better results, but is computationally more costly.

#### Evidence Combination

Evidence combination improves retrieval from the same **collection** by using different retrieval techniques. It will be a hot topic in the next few years, as...

...miss important documents if the documents do not appear in the top 30 or 50 examined. Certain **ranking** algorithms clearly do a better job on one

type of document or another. Some may adjust for...

...vocabulary terms entirely. These are all reasonable design choices that may conform to a particular type of **collection**. While searchers cannot always understand why one search engine misses certain documents that another retrieves, we know...

...The differences in search algorithms may offer one explanation.

Evidence combination can refer to searching the same **collection** with different search engines and combining the results, or it can refer to using different sources to gather information about documents. For example, a **collection** of newscasts might be searched from speech text created by speech-recognition software. Closed-caption broadcasts would...

...from speech to text (speech synthesis). Both speech recognition and speech generation software must be developed in **order** to create good VUIs. The easier of these is speech generation. People already can understand computer-generated...Unisys, Dialogic, and AT&T.

Most of the research with NLP and speech recognition concentrates on understanding **word** boundaries and correctly **identifying** phonemes across diverse speakers and accents. This is a non-trivial task. One solution is to train...

...ask our car for directions and have it tell us where to turn next, after it has **mapped** out our route. In fact, that is available now. We will tell our agent to read us...

...fits how they think and work. For instance, we have never found a user population that can **distinguish** between " **subject headings** " and "keywords." Don't expect that they will learn. Just create a system that doesn't require...

...knowledge unrelated to their day jobs.

Create access models--subject, author, fields -- that make sense to your **organization**, even if this goes against library orthodoxy. If you only have computer science materials, don't expect that the Library of Congress **Classification** will be useful. Think about why **classification** schemes were invented and then use something that can help distinguish among the materials.

Last, design the...

...Conclusion

All these technologies add up to a seamless suite of information tools that will find information, **organize** it, keep it up to date, forage for patterns, and present understanding. In other words, an Answer...from gathering isolated facts and statistics. We must comprehend and clarify the place of information in the **organization**. This is a role for practical visionaries.

Fortunately for us, that's exactly who we are.

Susan...

...freely, use portions of the text and illustrations for other purposes, or include the article in future **collections** .

Here are some samples of questions difficult to answer in traditional information retrieval systems:

Identify bacteria in...

...I need to keep upon new information technologies as they appear. (This means that I need to **identify** new **terms** and also to drop those that have become outdated.)

Tell me when my competitors have come out...

...new product. I don't want any other press, releases.

WHAT EXACTLY DO MEAN BY MEANING?

People **extract** meaning from text on many levels:

\* Phonetic is the actual sounds made when we pronounce words. This...

...Syntactic is the role each word plays in a sentence. Many of today's

search engines can **parse** a sentence, as we learned to do in elementary school, in **order** to pick out the subjects, verbs, objects, and phrases. This enables the engines to distinguish between Bill...ss pc= and (ec=1? or ec=6?) and (predict? or projecting or projected or future or **forecast** ? or trend or outlook or year0 (200? or 201?)

(2:30 that day)

Dennis (calling boss): Hi...

...can to get you the info you need. I'm using Puffin Search to merge and relevance **rank** the searches I did in Dialog, NEXIS, and Dow Jones. Is it okay with you if I...

...9:00.

**OUTCOME:** Dennis had to quit, having missed both lunch and dinner, at document 322, in **order** to have time to write the summaries and bullet points in time. Document 463 showed that Automated...

...retirement. Dennis went on to help create a company-wide information system, designing templates for interaction and **categories** for automatic indexing.

Automated Widget Company, October 5, 2009. 10:00 AM

Boss: Good Morning, Alvin. We...

...you want this? What format?

Boss: I need it by noon today. Give me lists of products, **organized** by name of company. Then I'd like of summary of trends in the industry. Just summarize...

...6 months ago.

Alvin: Same format?

Boss: Yes, but make the charts a larger font size. Also, **extract** the major points and put them and the charts in a slide presentation. Give me a **separate** slide on MS Widgets. I want that one by 1 PM.

Alvin: Anything else?

Boss: No, that...

...figures and produce a list for each company. Then I will find trends and predictions. I will **extract** major points that appear in two or more articles or are mentioned several times in one article...profile. They have developed a "company's coming" remote control module that hides clutter, inventories the refrigerator, **orders** groceries, cleans the house, turns on the oven, and changes the sheets.

In the MS Widgets report...

...we have a unique perspective about information itself. We understand how to ask the right questions in **order** to kind what we need. We understand balance in **collections**, good sources, and how to **categorize** materials so people can find them. This is invaluable. We also have something the others may lack...

...what to look for as you go about putting together an intranet or information system for an **organization**. These thoughts are tentative because they haven't been tested, and may theories are just as suspect...

**34/5,K/4 (Item 4 from file: 275)**  
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02313553 SUPPLIER NUMBER: 55100407 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Increase Your Bottom Line: Automated Customer Service and Marketing. (Aptex Software SelectResponse 3.0 and SelectCast) (Product Information)**

Edwards, Larry M.

e-Business Advisor, 17, 7, 30

July, 1999

LANGUAGE: English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 2606 LINE COUNT: 00219

ABSTRACT: Aptex Software's SelectResponse 3.0 and SelectCast are 'intelligent' client-server software solutions that allow companies inundated by overwhelming numbers of e-mail and Web-based queries to maintain their customer service quality, without having to add and train new employees to deal with the crush. SelectCast and SelectResponse mine unstructured content, such as FAQs, customer inquires and knowledge bases, and automates customer interactions online.

COMPANY NAMES: Aptex Software Inc.--Products

DESCRIPTORS: Electronic commerce software; E-mail; Help desk software; Product description/specification

PRODUCT/INDUSTRY NAMES: 7372640 (Electronic Commerce Software); 7372605 (Electronic Mail Software); 7372564 (Help Desk Software)

NAICS CODES: 51121 Software Publishers

TRADE NAMES: SelectResponse 3.0 (Help desk software)--Design and construction; SelectCast (Electronic commerce software)--Design and construction

FILE SEGMENT: CD File 275

... online shoppers is critical to achieving the response ratios necessary for financial success.

Enter Aptex Software, Inc., **ranked** one of the top personalization software applications by Forrester Research. Aptex develops "intelligent" client-server software that...

...needed for this task). The software dusters incoming e-mail messages that don't fit into a **predetermined** category, and the tuner sets up a new category for each duster detected. The tuner then sends...

...and direct-mail response rates, and to selectively target audiences that fall into identified behavioral groups or **categories** by personalizing and targeting responses. It's intended to benefit online publishers, e-commerce sites, and direct...

...automating online advertising and promotions, based on real-time customer behavior. The software is distributed in three **categories** or modules: Ad Server, Commerce, and Content.

"This is predictive marketing," Gaffney explains. "We are profiling the..."

...present product offers to customers based on their shopping profiles.

SelectCast for Content automatically manages document input **streams**, builds logical **information** channels, and presents content customized to each user's interests. This module is used by **organizations** that package news digests for online distribution, including News Edge, PointCast Corporation, and Data Times Corporation, as...is known as collaborative filtering. That is, a set of rules is preprogrammed into the system. When **keywords** and phrases are **identified**, the associated responses are returned in accordance with those rules.

"The key thing is, how good is..."

...5; Net Perceptions received a 4. Since then, however, analyst Paul Hogan has modified his stance somewhat, **ranking** Net Perceptions at least as high as Aptex.

His change in sentiment is not based on technological...a broker. Autoresponses are created with information from knowledge-bases, which contain 120 FAQs and some 600 **categories** of previous e-mail responses. Customer inquiries not automatically answered are **ranked** by urgency, and immediately routed to a broker for a response. SelectResponse also attaches to each message...

...CASE STUDY--SelectCast

PointCast, Incorporated is a free Internet news service that provides information in 43 industry **categories** to its subscribers. But these are broad **categories**, and subscribers want more specific information. To that end, PointCast plans to launch a new service this fall that will provide several hundred "PointCast Topics" its subscribers can chose from.

"There is some remedial **categorization** by the content providers,

but not nearly to the granular level that we require to really be...

...in better ways," Perna says. "That's really what its key value is, creating better ways to **categorize** the content and make it more personal to our viewers. That's what it's all about..."

**34/5, K/5 (Item 5 from file: 275)**  
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02252257      SUPPLIER NUMBER: 53389834      (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Call Center Roundup. (Buyers Guide)**  
Teleconnect, 16, 12, 78(1)  
Dec, 1998  
DOCUMENT TYPE: Buyers Guide      ISSN: 0740-9354      LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 6375      LINE COUNT: 00527

**ABSTRACT:** A guide to call-center products is presented. Vendors are listed alphabetically, along with a brief description of products available. Artisoft's TeleVantage 2.0 is a PC-based system for smaller businesses, while Apropos offers a suite of modules that can handle larger installations. Some products, such as those from Blue Pumpkin, are designed for workforce management. Brightware's Internet Front Office customer-assistance software modules handle telephone and Internet support services. CosmoCom, Digital Techniques, and IEX Corp offer a variety of options. Melita International and NICE Systems are known for their automatic call distribution packages. Nortel Networks' offerings are among the most comprehensive. Siemens' ResuMeRouting software implements 'call by call' routing using computer/telephone integration technology. Other vendors include Spectrum, Telecorp Products and Virtual Hold, whose namesake ACD enhancement performs automatic callbacks.

**DESCRIPTORS:** Telephone management device; Telephone management software; Hardware buyers' guide; Software buyers' guide

**PRODUCT/INDUSTRY NAMES:** 3661130 (Automatic Call Distributors); 3661170 (Telephone Management Systems); 7372672 (Telephone Management Software)

**SIC CODES:** 3661 Telephone and telegraph apparatus; 7372 Prepackaged software

**FILE SEGMENT:** CD File 275

... Oakbrook Terrace, IL -- 630-472-6900) offers a suite of four call center products, each available as **separately** -priced-but-integrated modules. The Apropos Server is a switch- and network-independent CTI application that call...

...Blue Pumpkin's (Mountain View, CA -- 650-948-4998) PrimeTime is a workforce management system comprised of **forecasting** and scheduling software that's integrated with your call center's ACD. Using a standard Windows interface...

...locked in, or can be made available for rescheduling. Three configurations are available: PrimeTime F&S (primary **forecasting** and scheduling); PrimeTime Enterprise (for larger, enterprise-level call centers); and PrimeTime Skills (a skill-based scheduling...

...BRIGHTWARE

Brightware's (Novato, CA -- 800-532-2890) Internet Front Office is customer assistance software modules (sold **separately** or as a package solution) for e-commerce businesses. The Advice Agent module is an automated Web...

...send messages for agents to electronic displays or reader-boards. A television version offers the option of **sending** real-time **information** to color televisions, and a LAN model will display messages to windows on LAN workstations. Statistics are...answer (the ACD server calls another

agent if the first one doesn't pick up after a **predetermined** number of rings); call park; call transfer to another agent; call preview (agent sees caller's name...).

...designed specifically to support Symposium's skills-based routing capabilities. With Symposium, call center managers set skill **categories**, based on the individual call center's needs, and assign agents to **categories** accordingly. Digital Techniques' software broadcasts statistics relating to the skill-based **categories**, such as how many agents are available in that skill-set, how many are in service, how...

...or custom reports. TotalNet can also be integrated with TotalView, IEX's workforce management system. TotalView features **forecasting**, scheduling, analysis/reporting, and administration for a large staff. Employee-tracking information provided by TotalView can be...is adaptable to existing ACDs' data capabilities and can support different ACD switch vendors within a single **organization**.

INNINGS TELECOM

Innings Telecom (Ontario, Canada -- 905-470-7070) manufactures CTI-based ACD systems for Nortel's...

...TASKE Sign software lets supervisors display data and other messages to agents on optional electronic signs. A **Forecasting** program displays an Excel spreadsheet that calculates info, such as number of calls that can be handled...Networked ACD product, a company can have the maximum number of agents supported at any number of **separate** sites).

NEC

NEC (Irving, TX -- 800-TEAM-NEC) makes a wide variety of ACD products. Global Navigator...

...Dallas, TX -- 800-4NORTEL) Symposium Call Center is an NT-based server offering full ACD capabilities. Symposium **organizes** call center agents in various skill-sets, defined by user-supplied criteria. For supervisors, Symposium offers complete...computer), Queue Control (manual control over call routing), and Hotlinks (programmed connections to key applications such as **ordering** services and online reference materials).

SPECTRUM CORP.

Spectrum (Houston, TX -- 800-392-5050/713-944-6200) uses...

...and new data items can be created. Users then set up templates that contain the desired data **items** and **identifying** labels, and size them to fit their wallboards. Different colors can be programmed to display when certain...

...longest idle distribution for incoming calls, and processes calls held in queue in first-in, first-out **order**. Agents log in and out of the system by calling a designated line port. Extra ports can...can display dynamic and historical data for analysis and evaluation, plus it includes reporting capabilities for managing **organizational** resources.

The Voice Services Module handles caller announcement, data **collection**, and music on hold. Calls routed to VSM will encounter one of three scenarios. An announcement provides...

...can be assigned to each different ACD group. When the number of calls in queue reaches a **predetermined** threshold, overflow calls roll over to another group. Supervisor stations include group, call, and agent status on...

...in a "virtual queue." When the next agent becomes available, customer numbers are automatically dialed in the **order** in which calls were received. The advantage of using this system to handle calls is that by...

...center managers develop complex scheduling systems based on call volume, agent skill level, and other factors. The **forecasting** module merges historical data with current ACD data to project call volumes and staffing requirements. Based on...

34/5, K/6 (Item 6 from file: 275)  
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02178490 SUPPLIER NUMBER: 20579799 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Teleconnect CT Expo best of show awards. (Industry Trend or Event)**  
Teleconnect, v16, n5, p26(12)  
May, 1998  
ISSN: 0740-9354 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 5716 LINE COUNT: 00446

**ABSTRACT:** An overview of the best products on display at the 1998 CT Expo is presented. Products were evaluated in such areas as mainstream telephony products, network-based phone systems and new developer tools. The new APS2000 by Bogen offers an alternative to voice mail. It includes a smart site-paging transmitter that occupies calls while providing users with pickup instructions. JTAPI is a new subsystem by Java Telephony API, that allows communication between Java software and central servers. This allows users to build client applets for call control and place it on a Web site to be retrieved by employees with Java compatible browsers or a stand-alone-Java-virtual-machine.

**SPECIAL FEATURES:** photograph; illustration

**COMPANY NAMES:** Bogen Communications Inc.--Marketing; Tennyson Technologies--Marketing; Registry Magic--Marketing; CLT--Marketing; Corinth Telecommunications Corp.--Marketing; Mer Communications Systems Inc.--Marketing; VoiceGate Technologies--Marketing; Minuteman International Inc.--Marketing; Metasound--Marketing; Parlance Corp.--Marketing; Sprint Corp.--Marketing; eFusion Inc.--Marketing; Immke Leasing Inc.--Marketing; Voxtron--Marketing; BCS Technology Inc.--Marketing; NBX Corp.--Marketing; Vodavi Communication Systems Inc.--Marketing; RING! Telecom--Marketing; Gordon Kapes Inc.--Marketing; Xinex Networks Inc.--Marketing; NexPath--Marketing

**DESCRIPTORS:** Trade Show Report

**PRODUCT/INDUSTRY NAMES:** 3661000 (Telecommunication Systems)

**SIC CODES:** 3660 Communications Equipment

**TICKER SYMBOLS:** FON

**FILE SEGMENT:** CD File 275

... directors, CEOs and sole proprietors.

Beyond these stringent requirements, we established no special limits on the product **categories** from which Best of Show winners would be selected. Among our picks, you'll find companies that...saved ports by enabling Internal Voice Dialing: a company directory with 500 name capacity.

Virtual Operator does **word** -spotting to pick **recognized** names out of natural phrases. If a caller says, "I'd like to speak to the Sales... issues.

You can set up TABSWeb several ways: view reports whenever you want, have them sent at **predetermined** times to your email address, have them sent to a printer, or save them as a file...

...using a Web browser, breaking them down by extension, department, date and other parameters.

To collect and **send** calling **information** to MER, all you need is a data **collection** box attached to your phone system. The data is downloaded at scheduled times, and stored on MER...EmployeeConnector, Public-Connector, and PagerConnector are the three applications in the NameConnector family. EmployeeConnector works inside an **organization** helping employees reach other employees, business partners and key contacts, without going through an auto attendant or...

...hear the same thing at the same time, and the call center can push audio and visual **information**, such as **streamed** multi-**media**, while the caller's on hold. The direct agent/caller interaction provides a prime opportunity to up...

...services. For example, it can intercept digits, call an Immix X-LINK X.25 Pad/modem in **data** mode, **send** codes in ASCII form, hang up, and wait for a callback ...dumb and cheap. The NICs and NIDs are the smart components: they look at the broadcast ATM **data - stream** and pull off packets corresponding to voice, video and LAN data. But since they only have to...

34/5,K/12 (Item 12 from file: 275)  
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01890677 SUPPLIER NUMBER: 17488771 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Internetwork 1995 TCP/IP software directory. (Internetwork supplement) (includes company index) (Buyers Guide)**  
INTERNETWORK, v6, n8, pA1(20)  
August, 1995  
DOCUMENT TYPE: Buyers Guide LANGUAGE: English RECORD TYPE:  
Fulltext; Abstract  
WORD COUNT: 14920 LINE COUNT: 01298

**ABSTRACT:** The TCP/IP Software Directory provides a comprehensive listing of software products available for TCP/IP network applications. The directory is an alphabetical company listing of software products that apply to the TCP/IP industry with a description of each package. Each product is identified by one of ten colour coded **categories** of software. The directory also provides an alphabetical company index divided by software category.

DESCRIPTORS: Software Buyers' Guide; TCP/IP  
FILE SEGMENT: CD File 275

...**ABSTRACT:** industry with a description of each package. Each product is identified by one of ten colour coded **categories** of software. The directory also provides an alphabetical company index divided by software category.

... of the Directory is the Index, which is located on pages 29 and 30. The Index is **organized** by TCP/IP software **categories**. To make the Directory easier to read, we have color-coded the 10 **categories**.

The 1995 TCP/IP Software Directory was compiled and edited by Contributing Editor Kimberly Yavorski and the INTERNETWORK editorial team. I hope you find it to be a valuable resource. Software **Categories** \* TCP/IP Application Suites \* TCP/IP Enterprise Connectivity Systems \* Internet Access Software Suites \* X Window System Applications...

...integrating fully into OpenView, SunNet Manager or NetView. It provides full traffic analysis, protocol decode, health monitoring, **segment** baselining and a global view of all network events and activities. OnSite EyeNet and NetReporter run with...

...communications, group scheduling, modem-sharing, data communications and faxing software. it also includes Lotus cc:Mail, Lotus **Organizer**, Cheyenne BitWare, Cheyenne BitShare and NetCom NetCruiser, an Internet access service.

Attachmate 3617 131 st Ave. SE...5/370 channel-attached printers. Barr-Print for TCP/IP acts as a line printer daemon to **receive** print **data** from Unix hosts. Other Barr options allow simultaneous printing from IBM mainframes, AS/400s and Digital Vaxes...family of FTP software products assist customers in tailoring their internet access needs to meet their specific **organization**'s requirements. Desired bandwidth capabilities can be determined for individuals or workgroups, including ISDN and SMDS level ...

...access front ends to move communications (data, documents, images and video) quickly, efficiently and accurately through the **organization**'s internet backbone to the proper destination. This includes continual read/write verification and validation. CERFnet also...based on a 256-byte

key. For increased security, the software contains anti-reiteration features on the **data stream** through a timed secondary key. In addition to security, the Realtime Lossless Compression Algorithms can be used... utility application. Ethernet and Token Ring statistical data from RMON-compliant agents are collected and stored in **separate** databases for long-term trending and analysis of the network. A powerful baseline engine allows this data...

...the network manager with a baseline report, allowing for critical decisions to be made concerning capacity planning, **forecasting**, performance optimization and other performance statistics.

Desktalk Systems  
19401 S. Vermont A,,e.  
Torrance, Calif. 90502  
(310...)

...s network hardware. It lets users create virtual LANs by drawing them. Interconnecting ports, modules or LAN **segments** to create a virtual network in a DEChub 900 MultiSwitch is a drag-and-drop operation. HUBwatch ...Model Type Negotiation, Response Protocols and extended attributes. It also features Desktop DLSW, which allows MIS to **send SNA information** across TCP/IP WANS without compromising Features or Functionality. It includes printing and file transfer over TCP...

...It supports a dynamic master/sub-agent architecture, which supports distributed development oF MIB elements within an **organization**, creation of dynamically extensible MIB architectures and automatically expandable managed devices. Envoy is asynchronous, and compliant with...network traffic; Domain View for concurrently monitoring and presenting diagnostic information of multiple network parameters and multiple **segments**; and Resource Manager for monitoring any remote SNMP device.

Frontier Technologies  
10201 N. Port Washington Road  
Mequon...Open ANSI. Terminal emulation provided includes VTI 00, 220, 241, 320, A20, and Wyse 60. Mouse/cursor **mapping** gives a PC look-and-feel to Unix applications. Remote applications can be **separately** configured to use different color and screen size attributes to identift host functions. Scalable fonts allow a...

...Map  
Recon/Map is a tool that keeps network administrators aware of the current status of any **segment** of a TCP/IP network by providing up-to-date snapshots of the network on demand. It generates a list of all the hosts on local or remote IP **segments**, compares the current state of the network with all of the host-name databases that may be in use, and flags mismatches. With Recon/Map, an administrator with a problem **segment** can see changes happening in real-time.

MILAN Technology 1299 Orleans Dr. Sunnyvale, Calif. 94089 (408) 744... It supports virtually any version of Unix, Windows and Macintosh operating systems, as well as character-based **terminals**. it strictly follows **recognized** standard such as SMTP, MIME and POP-3 and runs network protocols such as TCP/IP, PPP...

...pricing both dedicated circuits and Frame Relay services. Performance-1 is used to model the performance of **hierarchical** networks. Designer is for selecting optimal concentrator locations, and international is used to price dedicated circuits within...their local systems.

\* Purveyor WWW Server for Windows NT  
Purveyor WWW Server for Windows NT enables organizations **to** publish public and confidential media information on the Internet as well as their own corporate LANs. Purveyor...supports the above RMON MIB groups plus Token-Ring Ring Station and Token-Ring Ring Station Order **Group**. It uses a Token Ring adapter with an ODI driver capable of "promiscuous" mode operation. It also...Goltermann 1030 Swabia Ct. Research Triangle Park, N.C. 27709 (919) 941-5730

\* RDA-3000 Remote Segment **Monitoring** System

The RDA-3000 Manager is an application for managing remote network

segment **monitors**. Using SNMP, RDA-3000 enables network managers to gather extensive information about scattered LAN segments **From** a single workstation. This RMON-based application collects network statistics, sets alarm thresholds, and performs protocol analysis on individual segments. **Ethernet** and Token Ring versions support RMON extensions such as application-layer statistics, protocol distribution breakdowns, and round ...

**34/5,K/13 (Item 13 from file: 275)**  
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01858162 SUPPLIER NUMBER: 17633999 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**GrapeVine grows on Notes sites. (GrapeVine Technologies' workgroup software)**  
Power, Keith  
Software Magazine, v15, n10, p141(3)  
Oct, 1995  
ISSN: 0897-8085 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 1753 LINE COUNT: 00145

**ABSTRACT:** GrapeVine Technologies' GrapeVine for Lotus Notes groupware management system facilitates information sharing, according to GrapeVine founder and CEO Cyril Brookes, by delivering information that is relevant. The program uses the Knowledge Chart **classification** system to let companies classify all their corporate information and include keywords and phrases describing the way the business works. GrapeVine users maintain an Interest Profile with keywords based on those used in the Knowledge Chart; they weight each keyword in their profile to set the amount of **information** they will **receive** on each topic. National Semiconductor will receive 1,000 licenses for GrapeVine in a deal worth more than \$500,000; other GrapeVine customers in the US include Lotus, HP, Consolidated Natural Gas, Dow Chemical, and M.W. Kellogg.

**SPECIAL FEATURES:** illustration; photograph

**COMPANY NAMES:** GrapeVine Technologies--Products

**DESCRIPTORS:** Product Information; Product Description/Specification; Workgroup Software

**SIC CODES:** 7372 Prepackaged software

**TRADE NAMES:** Grapevine for Notes (Workgroup software)--Design and construction

**FILE SEGMENT:** CD File 275

...**ABSTRACT:** founder and CEO Cyril Brookes, by delivering information that is relevant. The program uses the Knowledge Chart **classification** system to let companies classify all their corporate information and include keywords and phrases describing the way...

...used in the Knowledge Chart; they weight each keyword in their profile to set the amount of **information** they will **receive** on each topic. National Semiconductor will receive 1,000 licenses for GrapeVine in a deal worth more...

... government agencies are continually bombarded by information from both internal and external sources. The challenge for these **organizations** is to be able to use this information effectively and to manage the knowledge gained, said Cyril Brookes, GrapeVine Technologies' founder and chief executive officer.

"The biggest barrier to most information-sharing products is **organizational** culture," said Brookes. "But GrapeVine is designed to work around cultural problems. In fact, it's changing..."

...shared with the appropriate people without having to know who they are." This is enabled by a **classification** system called the Knowledge Chart.

The Knowledge Chart allows companies to classify all their corporate information, whether...

...their databases, or coming in from such sources as bulletin boards, news

services and E-mail. Each **organization** tailors its own Knowledge Chart so that it contains the keywords and phrases that describe the way...

...business changes, the company modifies the Chart.

Each GrapeVine end user also maintains an Interest Profile with **keywords** -- **identifying** areas of interest based on those in the Knowledge Chart. Users then rate each keyword in their...

...knowledge, not just-in-case data. GrapeVine will also help our people exploit the knowledge in our **organization** without duplication, and so enhance our service delivery."

GrapeVine for Notes, said Gall, lets users throughout the...

...review incoming information on their projects, they log it if it's useful. The data then gets **categorized** for action or comment by team members or other departments, or escalated to the team leader or...

...New South Wales. This research focused on what some call "unstructured information" such as ideas, rumors and **forecasts**. Brookes founded GrapeVine Technologies in 1986 to commercialize his research. "We perceived that there was this huge...to target large corporations that face a major information sharing or overload problem. These would include any **organization** with more than 500 Lotus Notes or Exchange users, he said.

"We have a very strong alliance..."

...quickly to capture market share. By 1997 the information-sharing market is going to be on the **order** of \$1 billion a year."

34/5,K/14 (Item 14 from file: 275)  
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01833429 SUPPLIER NUMBER: 17393377 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Publishing on the World Wide Web. (newspapers offering World Wide Web-based information services)**  
Seybold Report on Publishing Systems, v25, n1, p8(11)  
Sep 1, 1995  
ISSN: 0736-7260 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 10122 LINE COUNT: 00792

SPECIAL FEATURES: 'illustration; other  
DESCRIPTORS: Electronic Publishing; Online Information Service;  
Publishing Industry; World Wide Web; Industry Trend Or Event; Industry  
Event; Internet  
SIC CODES: 7375 Information retrieval services; 2711 Newspapers  
FILE SEGMENT: CD File 275

... plugs into a box called a dsu, which technically is not a modem (because it doesn't **send** and **receive** **audio** tones, just pure digital pulses) but performs roughly the same function. The dsu, in turn, plugs into and communication needs. It can then make **arrangements** with data carriers and network access providers to get you attached to the Internet. Comport is a...

...wears off. If you live in Des Moines, you'll probably stay interested in the Iowa weather **forecast**, this Saturday's garage sales and how your favorite high-school basketball team is doing. The war...of the First Step Module it adds a community news service; employment, automotive and real-estate ad **categories**; interactive chat sessions; and basic Internet access. Note that this price doesn't include the Net access...Butler server software with sample data for each database; AppleSearch and WWW client software; Acrobat Pro; clickable **maps** and e-mail Common Gateway interfaces; customizable Web pages and forms; and Apple raid, Retrospect Remote and...the Internet. Using Telefinder software, users with a tcp/ip connection will be able to browse the **collections** and download high-resolution images as if they had used Wieck's existing dial-in service. Future...

...on the Net. The Diwan-IDI system is based on Diwan's Media Archiving and Publishing System ( **MAPS** ) and IDI's BasisPlus database and Basis WebServer. Together, they enable documents created in most popular desktop ...

...html and knowledge of information structure provided by Pira International (an independent, UK-based research and technology **organization** for the print industry), the system automatically links elements for easy reference and retrieval on the Web.

The details. **MAPS** is Macintosh-based media management and archiving software for diverse media, including text, pictures, QuickTime movies, sound...

...at six sites internationally, with three more pending. Some of the sites include the Food and Agriculture **Organization** of the United Nations in Rome, Express Newspapers Plc, News International Newspapers Plc, Esselte-Letraset in London...

...archiving certain file types to certain locations, copying found files into new locations and converting file types, **extracting** information from selected files, and archiving files to the sql server. Images can either be referenced by...enables individual Xpress articles to be exported in html format. The page components are then archived to **MAPS** with links to the Xpress page, which can be archived in pdf format. Therefore, when users access...

...From there, the links are sent to the WebServer from the BasisPlus database in the form of **MAPS** queries and made available on the Web.

Netscape and Mosaic browsers are used to view the Web pages from any hardware platform. The WebServer can also be accessed from within the **organization** via Netscape or Mosaic, which enables fast drag-and-drop movement of information and fast access, as...

...IDI for use of its server. It has since done so and pricing is as follows: The **MAPS** Tools Manager and ten-seat **MAPS** Browser license will come with the **MAPS** Media Server and **MAPS** Web Server, which incorporates IDI technology for Pound sterling 25,000 (\$37,500). The configuration allows for...

...implementation was not up and running at the time of the show. Caledonian plans to use the **MAPS** Media Server and Web Server running on Sparcstations, with the Tools Manager on a Power Mac. The...

...photos per day and accommodate 200 Browser and six Tools Manager stations accessing the server throughout the **organization** .

Subsidiaries. Shortly after the show, Diwan announced two wholly owned subsidiaries to improve the targeting of its line of products. **MAPS** Limited will develop and market the **MAPS** product as well as PictureNet, NewsNet and CommNet. Diwan Publishing Software will market the parent company's...

...to support others.

Users pose a query that searches all available information sources simultaneously and returns relevancy- **ranked** results. The system supports various types of searching, such as query by concept, query by example and ...employs a team of computational linguists, fluent in 15 different languages, who have created lexical algorithms to **identify words** in English, Spanish, Japanese and other languages. SRA claims that NameTag is accurate 95% of the time...

...information to be retrieved from these various sources. SRA has built filters that allow information to be **extracted** from each database and updated at a user-defined frequency. Currently SRA has 12 different filters, but...for republishing newspaper stories as html pages. A paper's style tags in Word could easily be **mapped** to html tags, and the Internet Assistant gives a standard way to insert links to graphics and...

...chalk talk describing how the system works. The key concept is to keep the editorial database safely **separated** from the Web.

DT's pagination system runs on Unix computers and uses the Sybase relational database...

...Atex ad-entry systems. During the past year, though, it has developed an application called AdParse that **extracts** and indexes the text of ads from Atex, SII and other newspaper systems. The ad text and indexes are copied into a **separate** Sybase database that acts as a full-text retrieval system for ads; this database is updated constantly...

34/5, K/15 (Item 15 from file: 275)  
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01805565 SUPPLIER NUMBER: 16280777 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
IFRA '94 recap: Europe adopts Windows, new systems abound, retrieving images. (includes related articles on Partner von dem Druck's innovative drum scanner and an acknowledgment to Apple for the use of its QuickTake digital camera)  
Joner, Urban; Karsh, Arlene E.; Neeff, David; Tribute, Andrew  
Seybold Report on Publishing Systems, v24, n5, p3(55)  
Nov 17, 1994  
ISSN: 0736-7260 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 44978 LINE COUNT: 03568

SPECIAL FEATURES: illustration; other  
DESCRIPTORS: Trade Show; Product Description Specification; Newspaper Industry Software; Market Trend Market Analysis; Industry Trend; Conferences and Meetings  
TRADE NAMES: Microsoft Windows (GUI)--Usage  
FILE SEGMENT: CD File 275

... one that must worry Apple, was the rapid increase in Windows applications since last year. While few **organizations** contemplate the use of Windows applications for handling graphics in any form, as a client workstation in...

...Drupa.

Images and retrieval systems. There is no letup in the explosion of products dealing with image **transmission**, **data** storage and retrieval, and other topics as libraries and databases encompass text and graphics, with multimedia on...for installation late this year.

Deadline: will the market buy it? So far, Atex has received minimal **orders** for Deadline, which had been introduced initially as the company's New Front End at the ANPA...

...two-pronged system designed to track, route and manage all page elements. It will be available in **separate** versions for pages and ads.

Safari for Pages links editorial and page makeup functions.

Safari for Ads...includes a series of customization options ranging from different car models and artwork through logos, contact information, **maps**, etc. The core technologies Automatrix employed to develop the application were FileMaker and Xpress, glued together with...

...level while remaining consistent with the overall campaign.

CCI features Word, production control

In its theater and **separate** demonstrations, CCI Europe emphasized new features for production control and the integration of Word into its NewsDesk system.

CCI said it has received **orders** for NewsDesk editorial systems from 14 newspapers. It is being used in production by two of them...remember, IBM was the official supplier of computer-related tools for news coverage in Lillehammer.

In a **separate** project, Dagbladet chose Lotus Notes as the "reporter toolbox" to provide reporters with a local and a...

...The concept behind the CCI Ad System is to combine decentralization and pagination with database control, in **order** to offer integrated production and output of display ads, classified pages and ad stacks. Work is under...

...new gateway will be a standard product to which any vendor or system integrator can interface in **order** to get full, two-way communications with "old" Atex editorial systems.

In the case of the integration to move into the North American market. We've already reported an **order** from the Toronto Star. Another one comes from Compton Publishing, which will use the system to produce...editions and runs shorter than 2,000 copies.

Codesco features wire, Planner Xtensions

Codesco is a versatile **organization**, developing its own Quark Xtensions, marketing third-party Xtensions and plug-ins in German-speaking countries, and...

...kerning, as a style that can then be applied to other elements.

\* Hotline automatically calls Codesco and **sends** it **information** about the specific Macintosh, Xpress and Xtensions in use so that this information can be used by...

...RNIS networks; and software modules from Sun, Sybase, Archetype, Quark, Adobe, Corel, Microsoft, etc.

The company is **organized** into three departments to provide custom software development and networking, system integration, and service and support for...tremendous amounts of resources into r&d and the manufacturing of its own hardware and software. In **order** to push sales of its own hardware, it may choose to market a system that uses as...

...system at VUM (Vlaamse Uitgeversmaatschappij) in Belgium. For those not already familiar with the company or the **order**, VUM is a publishing house that publishes De Standaard, Het Nieuwsblad and De Gentenaar newspapers, with a...Financial stability helps Baseview distinguish itself from other vendors in the newspaper industry.

After announcing several significant **orders** at Nexpo, Harris has tallied another long list of **orders** for its XP21 product line (but not quite the length usually garnered by Baseview). The list includes **orders** for its NewsMaker editorial system and a significant **order** from the New York Post for a classified system.

Believing the European market is dominated by desktop...database can be set up to resemble an Atex J11 system, particularly in the way queues are **organized**. The database can load 1,400 files in three seconds when scrolling through wire stories. The directory...part of ISGI's development. Monigraaf systems are either integrated into the ISGI system or sold as **separate** systems, which is most common in Scandinavia.

ISGI has three development groups: in Finland, where Windows software

...

...years ago, ISGI contracted with the Hamburg-based development group Pape and Partner for a number of **separate** modules for the planning of ad pages and for classified pagination. This project was later taken over...

...calendar for selecting publication dates appears flexible, allowing multiple publications and multiple zones (editions).

Pricing is kept **separate** from the main application, enabling easy customization to meet the needs of each newspaper.

Display and classified...

...pagination pass, the system generates a report of the volume of ads placed and not placed, by **classification**.

Editorial. The client editorial system, which also runs on Windows pcs, was shown with an Oracle database...advertising budget, color requirements and statistics for editorial and advertising mix. Once the configuration is set, the **standing** pages and logical sections of the publication can be assigned. The software also supports the placement of...

...release next spring. Those items will be covered in our next issue.

Business units. The company has **organized** itself into **separate** business divisions, each concentrating on a specific market area. At IFRA, the focus was on the Publishing...

...which covers newspaper and magazine markets and whose primary product is the Linopress system. With the new **organization**, the work of each division will be project-based, thus giving its project managers complete responsibility for...

...and Partner for ad and page planning, Hasselblad for picture wire services, URW for logotype generation, Digital **Collections** for text and image archiving, and GFI for commercial edp. The company emphasized that the partnerships aren...

...and enhanced production of ad pages.

All ads allocated to a page will be shown in a **separate** window. These will be dragged and dropped onto the page using the mouse or keyboard. Pagination will allow for flowing ads from the back or front of sections, and there will be controls over **classification** headers on repeat columns or pages. Linopress is one of a number of systems to have an ...and switch to 3B2 to compose the ad.

The ad taker's software includes a series of **predetermined** formats or styles the ad taker can apply to the copy. The 3B2 software picks up the ...

...relational database while maintaining incredibly fast access times.

The magic is achieved by running a very efficient, **separate** search engine in parallel with the sql database, allowing nearly instantaneous browsing of the whole database and...as elements that can be included with other systems. It was interesting to see the number of **organizations** looking at these systems. It seems this technology is being viewed by other vendors and also users...Station. To make its systems fast and flexible on deadline, Multicom keeps page geometry and page content **separate** throughout the editorial process. The page file is simply a list of page elements and geometry, without...  
...database.

What makes Mets unique is its implementation -- its approach to the interface and how it links **separate** components. Although it is targeted at new customers, Mets supports the existing GBT Mentor customer base. The ...page. If more than one person is working on a page, the page can be split into **separate** elements, with each user having part of the page locked from other users. Xtensions handle creating rules...When the Norwegian company ND Comtec lost its place as a competitive system vendor, it left its **organizations** in other countries without any centralized source of direction. They were on their own in finding new...elements to page areas. This allows for mixed schemes in which different area templates are used on **separate** parts of the page, thus accommodating different column grids on a page. Page areas are assigned to...pictures for makeup on Xpress page templates. The Article module contains a survey window that displays articles **organized** to show only those that are applicable to the page or publication in question.

Text editor. The...

...which, if found, can be routed to a particular folder.

The wire-photo module has four separate **modules** : receiver, picture adaption, browser and makeup for automatic placement of pictures on Xpress pages. The receiver module...

...page appear in the specific page folder for that page. It is possible to specify the order **in** which articles should be placed, such as to link articles, as might be the case with news...system contains many other modules we didn't have a chance to look at, including some separate **Xtensions** ; an ad dummying system for laying out ad pages; an administrative system for the manager; a search...

...profile, etc.

For special advertising campaigns, it is also possible to group advertisers according to all classification **criteria**, e.g., branch, number of staff, class, postal codes and telephone area codes. A group can

then...

...mail, and the result can be merged with a letter created in Word.

For each ad order, **it** is now possible to record the advertiser, the agency, the creator and the customer to whom the...

...is to be published. An ad can then be booked in all products with the same order.

**Further**, to each classification, **ad** type, page, width, etc., it is possible to link a specified typographic style.

With Logix, Cypress's system for handling images, it is possible to have images (e.g., logotypes) stored by classification, **advertiser** or global considerations. Included as part of the image-handling software are routines for purging logos that...products, VIP Classix is more interactive than the older Classix. Classified ads are arranged under each classification **heading**, subheading, etc., which will appear in a predefined order. **The** user can alter this order.

**The** interactive pagination allows the user to pre-place ads or modify the automatic placement on the screen...

...called and placed on the Xpress page, with editorial text added on top of it.

In order **to** use Classix, ads under specified classifications have to be selected and sorted in the system. The result...

...next couple of years.

An interesting application of gis technology is editorial graphics in which detailed maps **locate** the scene of a news story, such as an accident.

Sysdeco's gis systems are used today...in the database. This information is then used to retrieve and manage the production flow.

In order **to** be customizable, Sysdeco has included more than 70 different fields of administrative information with each article, only...  
...about it. But we were told that it will handle all types of ads, including taking orders **and** customer information; ad content; issues relating to production of display ads, space reservation and classified pagination; and...be as substantial as the \$80 million was five years ago.

On the bright side, while forecasting **no** new business in 1994, while it was in bankruptcy, SII received several major orders **and** reported more than \$42 million in revenues. If these sales figures are an indication of product acceptance...

...a library of available shapes and styles. There can be multiple catalogs in a system, and separate **catalogs** for different parts of a page. A layout can be changed by applying a different catalog; the...browse functions to navigate around different subjects. At the present time, text and graphics archives are separate **systems**, but they will come together next year.

URW moves into ad makeup

Best known for its extensive...

...Macintosh, Windows and os/2 computers, allows users to manipulate and compose display ads from a hierarchical **database** of objects. These objects can be individual characters, lines of text, groups of lines, layers or total...

...one of CCI Europe's prime customers), which has linked it to its own Nova ad order **and** management system.

The system will take in lineage advertising from a System Integrators classified system and display...we feel needs improvement is bringing data from Scoop into Xpress. Currently, the two systems are separate. **To** access Scoop files, it is necessary to use the normal file input procedures within Xpress. We would...system, although the newspaper design normally is based on the actual ad and editorial bookings.

In order **to** handle this, the Printa system can supply the prepress system with information about approved newspaper configurations (number...

...the field, trying to carve out their share of the market.

We know about some research organizations **that** are spending money and resources in this area.

If we look back on the developments in the...is used on the sending and receiving sides.

Because components of a page can be transmitted separately, **it** is not necessary to wait until the complete page is finished before transferring the different items.

Handling...

...to remote sites. The scanner can be upgraded to handle continuous-tone images and descreening. A separate **job** -preparation station is available, comprising a pc and large-format digitizer. It allows one job to be... scanner, with

on-the-fly data compression inside the scanner to decrease file sizes and increase data **transmission speed**.

Second, it featured software for batch scanning of ads. New this year were routines that semiautomatically cut...

...ad images or booked ads). The cut-up ads are then placed under the respective ad order **number**, received from the ad booking system. The software also handles ad images that are larger than the...section here, but we will call attention to some developments worth keeping an eye on:

\* Digital Collections' **impressive** library facilities, which include hyperlinks, as it gets ready for a U.S. thrust.

\* GAI's Context...

...previously had to enter search criteria to access a photograph. This is no longer the case.

\* Separate **privileges** on LeafDesk and Preserver. Until now, each user had the same privileges on the LeafDesk and the...text file or both. In relevant cases, the page image from which the text file was extracted **is** displayed in a separate **window**.

Because of difficulties with the language, we didn't spend a lot of time with this software...

...pictures, clipping files and images. It can be extended to manage videos and sound by storing extracts **that** are captioned in the same way as pictures. Images are stored and retrieved either as Acrobat pdf...such large library system is installed at the Scottish Daily Record, a Mirror Group publication.

Digital Collections **continues** to mature

Little has changed with Digital Collections' **software** functionality since we looked at it in the Hewlett-Packard booth at Nexpo. We continue to be...

...deliverables. Unfortunately, we were told this isn't in the plans.

The real change at Digital Collections **falls** into what you might think of as market maturity. The four-year-old company has taken pains...

...data from the Xpress page and brings text as rtf into a word processor, where additional keyword **and** thesaurus identifiers **can** be added. An input filter for using PaperDesk with System Integrators and Atex systems is also available...

...service. A final product, called the Electronic Visual Information System (ELVIS), is actually a service Digital Collections **has** begun to provide to German newspapers, magazines and picture agencies, using its own software. The host system...

...the host simultaneously. Databases from the publications Die Woche, Focus and Forbes are already online.

Digital Collections **is** working with a German mail order **company** it plans to bring online next year. The database will include a variety of advertising and promotional materials; photography is in process now using digital cameras.

Pricing. Pricing for Digital Collections **software** depends on the individual site requirements. The base module -- the RRE-Database - - begins at DM18,000 for...

...Murdoch publication in London. Picture-handling capabilities for the Windows client are still in development.

Digital Collections **is** moving ahead with its plans to open a U.S. office as a joint venture with Gannett...progress in the U.S. comes from copyright problems; there is already another company called Digital Collections **doing** business in the U.S. (the former AXS). Thus, the German company will be forced to find...

...opening it automatically launches a word processing application.

Database contents themselves may be organized into multiple collections **by** whatever criteria the site requires. In addition to managing text, Context Online software also saves facsimiles of...system called the UniTree Central File Manager, from Titan Storage Management Technologies. Titan has created a hierarchical **file** manager that performs the data management functions to organize the data files on the mixed media.

The...announced its largest digital archive customer to date: the John Fairfax Group of Australia. Its initial order **with** Job is valued at approximately four million Swedish crowns (although, when all phases of the installation are...or a caption.

Arcano attempts to rate probability using a bar graph displaying a frequency histogram ranking **the** number of hits. Clicking on a tall bar -- the highest number of hits in the story -- brings...include:

- \* User-tunable fuzzy logic.
- \* Full-text searches with Boolean or non-Boolean logic and relevance ranking.
- \* **Searches** on keywords in text and fielded data.
- \* Linguistic-phonetic capabilities.
- \* Use of truncated words.
- \* Thesaurus -- one or...

...S. company, TRIP Systems, of Monroe, CT. Unlike some other databases (such as the one Digital Collections **uses**), the TRIP database and kernel, as well as search data from an authoring system, can be copied...

...page image to fit on an A4 sheet. With that page image the operator can store keywords **to** identify **the** key elements in the document. Together those are stored in the database, which Ratio calls the Newsbase...

...point, depending on how many keywords have been entered, the database could have value as a collection **of** images, searchable by keywords. The search is fast, resulting in a display of pages on the monitor...

...New is the ability to receive all of the company's satellite services in a single data **stream** (**for** all or just specific services the site subscribes to) and the ability to browse satellite images on...

...off-the-shelf image browser software modules. Reuters is now offering what it calls an "open data **stream**," **accessible** via a variety of third-party software modules. Several of these modules were demonstrated, including ImageBrowser, from...transmit the image to London, where it was uplinked to the satellite, added to the satellite data **stream**, **transmitted** to a dish on the roof of Hall 1 and received at a Tecnavia Picture Desk next...

34/5,K/16 (Item 16 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01692075 SUPPLIER NUMBER: 15556409 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
Comdex Spring: **lilacs out of bare ground; novelties for PC-based publishing. (products previewed at conference) (Product Announcement)**  
Rossello, Rosanne  
Seybold Report on Desktop Publishing, v8, n10, p29(7)  
June 6, 1994  
DOCUMENT TYPE: Product Announcement ISSN: 0889-9762 LANGUAGE:  
ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 6350 LINE COUNT: 00491

SPECIAL FEATURES: illustration; photograph

COMPANY NAMES: Microsoft Corp.--Product development; Motorola Inc.--Product development; Electronic Imagery Inc.--Product introduction; Epson America Inc.--Product introduction; Nikon Inc. Electronic Imaging Engineering Div.--Product introduction; Polaroid Corp.--Product introduction; Fargo Electronics Inc.--Product introduction; Ziff-Davis Publishing Co.--Services; Serif Software Ltd.--Product introduction; Image Recognition Integrated Systems--Products; PlusTek USA Inc.--Products; Seaside Software Inc.--Product enhancement; Calera Recognition Systems Inc.--Product introduction; Actown--Products; Creative Labs Inc. --Product introduction; International Business Machines Corp.--Products; Silent Systems--Product introduction; MediaMagic Inc.--Product introduction; American Telephone and Telegraph Co.--Product introduction; Tektronix Inc.--Product introduction; Trinity Corp.--Product introduction

DESCRIPTORS: Comdex-Spring; Conferences and Meetings; Electronic Publishing; Product Introduction; Product Development; Operating System; Wireless Network; Trends; Integrated Software; CD-ROM; Image Processing Software; Color Ink Jet Printer; Flatbed Color Scanner; Scanner; Dye Sublimation Printer; Color Thermal Transfer Printer; Online Information Service; DTP Software; Hand-Held Gray-Scale Scanner; OCR Software; Optical Character Recognition Software; Database Application Development Software; Enhancements; Input Device; Digitizer; PCMCIA Standard; LAN Adapter; Network Software; Telephone Management Device; Stereo Vision; LCD Display; Mouse

SIC CODES: 7372 Prepackaged software; 3577 Computer peripheral equipment, not elsewhere classified; 3661 Telephone and telegraph apparatus; 3571 Electronic computers

TICKER SYMBOLS: MSFT; MOT

TRADE NAMES: Microsoft Windows 95 (Operating system)--Product development ; 3D-It (Graphics/imaging utility)--Product introduction; ImageScale Plus (Image processing software)--Design and construction; Epson Stylus Color (Color ink jet printer)--Product introduction; Nikon AX-1200 Scantouch (Flatbed color scanner)--Product introduction; Nikon NP-10 Coolprint (Dye sublimation printer)--Design and construction; Polaroid SprintScan 35 (Scanner)--Product introduction; Fargo Electronics PrimeraPro (Color thermal transfer printer)--Product introduction; The Interchange Online Network (Online information service)--Design and construction; PagePlus for Windows 3.0 (DTP software)--Product introduction; PhotoPlus (Graphics/imaging utility)--Design and construction; Image Recognition Integrated Systems DataPen (Hand-held gray-scale scanner)--Design and construction; Readiris (OCR software)--Design and construction; PlusTek USA ScanFX (Flatbed color scanner)--Design and construction; askSam (Database application development software)--Product enhancement; WordScan Plus 3.0 (OCR software)--Product introduction; WordScan 3.0 (OCR software)--Product introduction; Creative Labs AeroDuet (Input device)--Product introduction; Silent Systems FE4 (486-based system)--Product introduction; MediaMagic Telemetry-32 (Multifunction I/O device)--Product introduction; Tektronix Stereotek (LCD display)--Product introduction; Trinity Mariqua IController (Mouse)--Product introduction

OPERATING PLATFORM: Apple Macintosh; Microsoft Windows

FILE SEGMENT: CD File 275

... language is performed in a background task. The driver can provide multiple copies, collated copies and reverse- **order** printing.

Epson strikes a balance between foreground and background tasks.

Unlike some printer drivers that simply spool...cutting down on online time.

Freeware and shareware can also be downloaded. Other information, such as weather **forecasts**, stock quotes, sports and world news, is accessible.

The interface provides point-and-click access to information. You can even cut and paste icons from various service areas into a discussion in **order** to lead others to information they may need. A Task List lets you select what you want...

...are rotation in one-hundredth-degree increments, automatic trapping,

Pantone spot-to-process color conversion and color **mapping** for vector-based graphics. Color **mapping** allows you to change the colors of a vector-based graphic without leaving PagePlus. Rollup and pullaway... databases, 13 language dictionaries and one numeric dictionary are supported. The software first checks its dictionaries to **identify** a **word**. If no match is found, it makes a guess based on groupings of letters and on which...

...levels) and color. Twain is also supported.

Note that Scanfx is not a complete fax machine. In **order** to take advantage of the Scanfx's copying, printing and fax receiving capabilities, you need to attach...

...but its product is far from unusual. It's a handy, efficient, easy-to-use system for **organizing** volumes of electronic information. Basically, it is a freeform database. That means it doesn't look anything ...users of the product is the U.S. General Accounting Office, which uses AskSam for telephone interview **collection** and analysis, electronic publishing and its OCLC interlibrary loan interface.

AskSam Systems, Box 1428, Perry, FL 32347...

...to place information correctly in a card file for export to a database file or to Lotus **Organizer**. Ulead's ImagePals image-archiving program is also available as an option.

Actown, 8F, 527 Chung Cheng...

...sight principle, the AeroBase unit tracks the movements of the Aero devices in the virtual workspace and **sends** the **data** to the host computer. Only one serial port is required to attach the receiver unit to the...the background, perhaps while continuing to edit a document.

The Telemetry-32 is also a complete 16- **bit** **audio** board compatible with all major sound standards. It features a cd-rom interface, giving users access to...

...other windows are displayed as usual.

How it works. The multifunction controller replaces your vga connector in **order** to read the monitor's vertical sync pulse. The software merges a left-eye image and a...

...as it travels down the inside of the monitor's crt. The shutter, combined with the glasses, **separates** the two interlaced images. The left eye sees only the left image and the right eye only...

34/5,K/17 (Item 17 from file: 275)  
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01581402 SUPPLIER NUMBER: 13302893 (USE FORMAT 7 OR 9 FOR FULL TEXT)

The **Touring Machine** system: Bellcore information networking research

laboratory. (Multimedia in the Workplace) (Cover Story)  
Arango, M.; Bahler, L.; Bates, P.; Cochinwala, M.; Cohrs, D.; Fish, R.;  
Gopal, G.; Griffeth, N.; Herman, G.E.; Hickey, T.; Lee, K.C.; Leland, W.E.;  
Lowery, C.; Mak, V.; Patterson, J.; Ruston, L.; Segal, M.; Sekar, R.C.;  
Vecchi, M.P.; Weinrib, A.; S.-Y. Wu  
Communications of the ACM, v36, n1, p68(10)

Jan, 1993

DOCUMENT TYPE: Cover Story ISSN: 0001-0782 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 6607 LINE COUNT: 00563

ABSTRACT: Open systems are necessary for the implementation of distributed multimedia applications. An infrastructure supporting a distributed system helps alleviate the problems associated with individual multimedia applications residing on standalone computers and equipment. Routing, session control, network management, presentation and multimedia device control, media synchronization, and resource allocation all become difficult to administer on proprietary systems. Bellcore's Touring Machine

testbed addresses issues involving creating applications for widespread distributed multimedia systems. The project creates prototype software platforms for multimedia telepresence applications.

DESCRIPTORS: Multimedia technology; Distributed Systems; Communications Technology; Open Systems; Data Communications Software; Research and Development; Prototype

SIC CODES: 4800 COMMUNICATION; 4813 Telephone communications, exc. radio

FILE SEGMENT: CD File 275

... on top of a public network infrastructure? How will applications operate end-to-end across an infrastructure **fragmented** into multiple administrative domains? How can a common infrastructure best support emerging distributed multimedia applications?

The final...

...sessions. These sessions can share the same set of user input and output devices. An application has **separate** control of all supported media: audio, video, and data. Each component of a communication session can be... more connectors per medium, with source and sink endpoint represents a connector An endpoint represents a connector **termination** point. Endpoints are **distinguished** by medium, direction of flow, and the client receiving or providing transport. An endpoint represents only a logical transport termination point; it yields real transport when **mapped** onto a port. A port is typed by its medium and direction of flow, and represents a...

...among multiple concurrent sessions. Unmapping an endpoint-to-port assignment suspends a component of a session, while **mapping** an assignment resumes that component.

The Touring Machine API defines the set of messages passed between a

...

...services from the system [15]. The functionality of the API can be divided into the following five **categories** : client registration, session management, network access control, name server query, and interclient message passing.

Client Registration

A...of a connector without changing the session's logical topology. The endpoint-to-port assignments can be **mapped** and unmapped to resume and suspend certain components of a session. However, network resources are not released when an endpoint is unmapped so that connectivity is guaranteed when the endpoint is later **mapped** .

A client may dynamically create a new port at the local station. Since the transport mechanisms for...

...central respository of both static and dynamic information for the system. It contains information of the following **categories** : authorized users, registered clients, ongoing sessions, and Touring Machine stations and their ports. A client can query...

...lie applications that use the API to request services provided by the infrastructure. The infrastructure itself is **separated** into two levels: session control and transport control. The session control level provides logical control of communication...the transport of a session, the transport object, the second transient object, maintains the logical-to-physical **mapping** . The transport object is instantiated by the resource manager on initial successful allocation, and keeps track of...

...of resource objects. The A/V switch object makes audio/video connections. The data switch object makes **data stream** connections. The bridge object allocates and deallocates audio and video bridges for multiway communication. The trunk group...the other's requirements. The availability of a session abstraction in the Touring Machine system, which is **separate** from the applications, was central in the implementation of the interacting applications. In particular, the session provides...TWBnet experimental testbed. In its current realization MMCC is also a single conferencing application that enforces a **predetermined** set of control policies. Leung

et al. [14] concentrate on abstractions for handling digital **multimedia streams**. Blair et al. at Lancaster University [3, 18] start with models emerging from the Open Distributed Processing...

...the PX project [13] focuses on voice communications. Their focus, similar to ours, is on developing a **collection** of tool kits that provide common functions to voice applications.

A unique value of the Touring Machine...

...stations. For example, a client ought to be able to specify the position on the screen of **separate** video sources being bridged together, and set the volumes of **audio streams**.

3. Application structuring issues relating to managing multiple clients registered at the same station that have conflicting...

34/5, K/18 (Item 18 from file: 275)  
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01539264 SUPPLIER NUMBER: 12328079 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Telemangement software: buyers guide. (includes related articles on specific products and software selection tips) (Teleconnect Roundup)  
(Buyers Guide)

Teleconnect, v10, n6, p108(33)

June, 1992

DOCUMENT TYPE: Buyers Guide ISSN: 0740-9354 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 13912 LINE COUNT: 01213

ABSTRACT: A buyer's guide of telemangement software is presented. The guide includes application environment and price information. The software is classified by vendor. Each product is **separately** described and discussed. Some of the applications included in the directory range from bill reconciliation to call center management. Guidelines for purchasing software are discussed in the following **categories** : stability of distributor; lifecycle of product; report writer capability; mix of customer references; product versus customized solution; and support.

SPECIAL FEATURES: illustration; photograph

DESCRIPTORS: Software Selection; Directories; Communications Management; Software Packages; Telecommunications; Purchases

SIC CODES: 7372 Prepackaged software

FILE SEGMENT: CD File 275

...ABSTRACT: The guide includes application environment and price information. The software is classified by vendor. Each product is **separately** described and discussed. Some of the applications included in the directory range from bill reconciliation to call center management. Guidelines for purchasing software are discussed in the following **categories** : stability of distributor; lifecycle of product; report writer capability; mix of customer references; product versus customized solution

...

... profile, trunk and systemwide reports is produced based on a minimum database of 18 months of data. **Forecasting** and scheduling modules are available.

American Telemangement Software

TMAC-II

Applications: Bill reconciliation Operating Environment: IBM PC...

...Software (Cincinnati, OH) tracks vendor bills by account, vendor and location in up to 16 user defined **categories** . The system features over 85 management reports covering expense detail, summary by **organization**, exception variation, trend analysis, budget variance, accounts payable transrnittal, missing bills and statements.

Special application capabilities include...

of the costs associated with repairs and inventory (what you have in stock and on **order**). You also know what technical people you have available for repairs.

\* Lets you plan ahead for future...

**34/5,K/19 (Item 19 from file: 275)**  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
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01522280      SUPPLIER NUMBER: 12335096      (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**MacUser minifinders: 1001 Macintosh products. (Buyers Guide)**  
MacUser, v8, n8, p87(52)  
August, 1992  
DOCUMENT TYPE: Buyers Guide      ISSN: 0884-0997      LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 77991      LINE COUNT: 06173

**ABSTRACT:** A directory of 1001 hardware and software products for the Apple Macintosh microcomputer is presented. Each product has been reviewed by MacUser and each one's overall rating is given. Basic features are also provided as well as each product's price and the manufacturer's address. Products that are award winners are indicated with a \*.

**DESCRIPTORS:** Directories; Hardware; Software; Microcomputer  
**SIC CODES:** 3571 Electronic computers; 7372 Prepackaged software  
**TRADE NAMES:** Apple Macintosh (680X0-based system)--Equipment and supplies  
**OPERATING PLATFORM:** Apple Macintosh  
**FILE SEGMENT:** CD File 275

... Lane, 18th Floor, Foster City, CA 94404.

Data Acquisition & Analysis

IPLab Spectrum

This scientific image-processing package **extracts** and analyzes data from photographic-quality color images. Supports video capture and includes scripting language. Allows mathematically...

...617-625-4096. (July '88) [MF#602]

Ultimage

Ultimage/X is a scientific image-processing package that **extracts** and analyzes data from photographic-quality color images. Supports video capture. Includes scripting language and provides morphology...

...tools to manipulate and edit data. Can use System 7's publish-and-subscribe feature to update **maps** linked to data files created by other applications. A large library of **maps** and supporting data is available (some at additional cost), but there's no internal database manager. Version...

...and a hard-disk drive; 68030 CPU or higher and color display system recommended. \$795; optional street **maps**, \$200 to \$500 per county; entire U.S. on CD-ROM, \$25,000. Strategic **Mapping**, Inc., 4030 Moorpark Ave., Ste. 250, San Jose, CA 95117. 408-985-7400. (May '92) [MF#610]

Azimuth

Azimuth is a cartographic powerhouse that teams sophisticated projection **mapping** with 2-D-CAD tools. Lets you build excellent perspective **maps** of the earth based on a view from space. No built-in data-analysis features, but allows...a digital cartographer, displays demographic and marketing information geographically. It lacks an internal database manager and international **maps**, but it supports U.S. boundary **maps** by state, county, ADI, and DMA (not by ZIP code). Version 1.0 reviewed. Version 3.02...

...for Macintosh

MapInfo is a digital cartographer that displays demographic and marketing information geographically. Large library of **maps** and supporting data available (some at additional cost). Version 1.01 reviewed.

Version 1.13 shipping. Requires Mac Plus or later with 2 MB of RAM. \$995; additional **maps**, boundary files, and city- point files, starting at \$95 each; quantity discounts available; site licenses available. MapInfo... marketing information geographically. Has excellent performance and interface that incorporates Apple's DAL. A large library of **maps** and supporting data is available, but there is no internal database manager. Version 2.0 reviewed. Version...

...408-996-1010. (May '90) [MF#633]

CalComp ChromaVision QuickPlus

The ChromaVision QuickPlus is an accelerated 24- **bit - video** card. Sold only with CalComp color monitors. Doesn't support 16-bit color. High power consumption. Resolution...ColorPage T16/24

This 24-bit-color display system combines the ColorPage T16 monitor with a 24- **bit - video** card. The 16-inch screen size should be large enough for most professional applications. Sharpness, focus, and...

...May '90) H '88 Eddy [MF#641]

E-Machines Futura MX

Futura MX is an accelerated 24- **bit - color video** card that supports 38 virtual-screen sizes. Affordable but not as fast as similar products. Low power...

...T19/24

This 24-bit-color display system combines the E-Machines T19 monitor with a 24- **bit - video** card. A high-quality, affordable combination that delivers excellent overall performance. The 19-inch screen size is...

...outstanding. Good 39-page manual. Requires Mac II series or higher. \$4,198 (includes monitor and 24- **bit - video** card). E-Machines, Inc., 9305 S.W. Gemini Dr., Beaverton, OR 97005. 800-344-7274 or 503...

...TX/24

This 24-bit-color display system combines the E-Machines TX monitor with a 24- **bit - video** card. Delivers very good overall performance. The 16-inch screen size should be large enough for most...

...Systems Color 24

This 24-bit-color display system combines an Ikegami Trinitron monitor with a 24- **bit - video** card. A high-quality, affordable combination that delivers very good overall performance. The 20-inch screen size...

...8881. (Apr '90) [MF#650]

Mass Microsystems ColorSpace IIi/FX

These two NuBus cards bring live 24- **bit video** to the Mac. They can drive the Mac monitor and a TV display. The FX board converts...Bit Display System

This 24-bit-color display system combines an Ikegami Trinitron monitor with a 24- **bit - video** card. A high-quality, affordable combination, this system delivers good overall performance. The 19-inch screen size...

...Moniterm Viking C24

This 24-bit-color display system combines an Ikegami Trinitron monitor with a 24- **bit - video** card. This high-quality combination delivers good overall performance. The 20-inch screen size is large enough...

...II 16" Color

This 24-bit-color display system combines a Sony Trinitron monitor with a 24- **bit - video** NuBus card. A high-quality, affordable combination, this system delivers good overall performance. The 16-inch screen...

...91) [MF#658]

PCPC Shadowgraph

This system includes a 19-inch monochrome Ikegami monitor and an 8- **bit - video** card, delivering excellent gray linearity and MTF sharpness, with good focus and geometry. Provides 256 gray levels...

...click input on-screen from a light-tipped wand. Optional Laser Pointer

lets you control Cyclops while **standing** 25 feet from screen. Requires Mac II series or higher. \$8,495; Cyclops, \$1,195; Laser Pointer...408-434-1010. (June '91) [MF#664]

Radius PrecisionColor 24x

The PrecisionColor 24x is an accelerated 24- **bit** -color **video** card that lets you change screen resolutions on the fly. Good performance. Offers seven resolution choices ranging...

...mode only; 8- or 16-bit images can be digitized. Audio can fall out of sync with **video** due to NuBus data-transfer limitations. Requires Mac II series or higher. \$1,699. Radius, Inc., 1710...

...24L

This high-quality 24-bit-color display system combines a Sony Trinitron monitor with a 24- **bit** - **video** card. The 19-inch screen is large enough for most professional applications. Excellent color quality. MTF sharpness...

...729-2656 or 408-562-4200. (May '91) [MF#670]

RasterOps 24XLi

RasterOps 24XLi is a 24- **bit** -color accelerated- **video** card. With additional 16 MB of RAM, it can support on-board 10-MB RAM disk, hardware ...

...729-2656 or 408-562-4200. (May '92) [MF#671]

RasterOps 24XLTV

RasterOps 24XLTV is a 24- **bit** -color accelerated- **video** card. High power consumption. Supports hardware pan and zoom plus many virtual-screen sizes. Includes NTSC, PAL...

...364 is a dual-purpose NuBus board a digitizing and display board as well as a 24- **bit** display card for the Apple 13-inch monitor. Good but limited software. Requires Mac II series. \$1...408-562-4200. (Aug '91) [MF#675]

Seiko Instruments 14" Color (CM 1445)

This high-quality, 24- **bit** -color display system combines a Seiko Trinitron monitor with a RasterOps 264 24- **bit** - **video** card. A great value. Requires Mac II series. \$1,644. Seiko Instruments USA, Inc., 1130 Ringwood Ct...

...8/24

This high-quality, affordable color display system combines a Sony Trinitron monitor with a 24- **bit** - **video** card. Sharp, well-focused system delivers excellent color quality, and the 19-inch-diagonal screen size is ...

...19"

This high-quality color display system combines a Hitachi monitor with a Spectrum/24 PDQ 24- **bit** - **video** card. Few external controls are provided to manage screen-image characteristics. Requires Mac II series. \$4,398...

...21"

This high-quality color display system combines a Hitachi monitor with a Spectrum/24 PDQ 24- **bit** - **video** card. Excellent color quality. The 21-inch screen is large enough for professional applications. Requires Mac II...

...quality color display system combines a Sony Trinitron monitor with a fast Spectrum/24 Series III 24- **bit** - **video** card. Excellent color quality. The 19-inch screen is large enough for most professional applications. Excellent software...

...91) [MF# 687]

SuperMac Spectrum/24 PDQ Plus

The Spectrum/24 PDQ Plus is an accelerated 24- **bit** -color **video** card with good performance and features. Supports hardware pan and zoom and lets you change resolutions on...

...408-245-2202. (May '92) [MF#688]

#### SuperMac Thunder/24

The Thunder/24 is a fast 24- bit -color accelerated- **video** card with good software. High power consumption. Has four SIMM slots for a maximum 8 MB of...via control panel. Software version 1.0 reviewed. Version 1.12 shipping. Requires Mac II, Apple 8- bit - **video** card, and video source. \$695. Computer Friends, Inc., 14250 N.W. Science Park Dr., Portland, OR 97229...91) [MF# 710]

#### Entertainment

##### 3 in Three

This popular game is an endlessly fascinating, frustrating, fun-filled **collection** of 80 animated puzzles. Appeals equally to smart kids of all ages. Nutty plot requires saving hapless...uses your checkbook like a ledger. Limited financial planning, but features include an overbudget warning for specified **categories**, a transfer command that shifts funds between accounts, an address database, drawing tools for designing checks, a...Plus or later with 4 MB of RAM and a hard-disk drive. \$895 per module, except **Order** Processing, Purchasing, Sales/Lead Tracking, and Request for Service, \$795 each; Point-of-Sale, \$695; Job Cost...

...receivable, accounts-payable, and inventory modules. There's no integrated payroll, and it lacks the ability to **break out** data by departments. Version 2.0 reviewed. Version 3.0 shipping. Requires Mac Plus or later, System...

...an excellent tool for preparing federal and state tax forms. Intuitive and easy to use, with all **separate** forms automatically interlinked for accurate recalculation. Accepts data from the leading personal-finance programs. Displays in WYSIWYG...322-0573. (Feb '92) H '88, '91 Eddy [MF#765]

#### Rags to Riches

Rags to Riches has **separate** general-ledger, accounts-receivable, accounts-payable, inventory, and professional-billing modules. Transactions automatically post through all relevant...

...Blvd., Bldg. 25, Santa Clara, CA 95054. 408-727-8096. (May '90) [MF#766]

#### Sales and Marketing **Forecasting** Toolkit

This Excel-based productivity package has 18 worksheets, 8 charts, and 1 macro sheet. You create...

...application for analysis and a DA for recording data. Each client's time slips are stored in **separate** files. Batch entry is easy. The package's interface needs polishing, and layout isn't WYSIWYG, making...

...multiuser system designed to meet the needs of government and nonprofit agencies. Contains general-ledger, payroll, purchase- **order** /voucher, and accounts-receivable modules. Can handle multiple-fund accounting and multiple-year adjustments. Requires Mac Plus...

#### ...Macintosh

The CasioLink is a hardware/software package that links the popular Casio BOSS series of electronic **organizers** to a Mac. The software is a bit limited and clunky. Can import and export to text...charts, which can be placed in a document. The only programs from which this handy utility can **extract** data are MacWrite II, Word, MacDraw II, and PageMaker. Version 1.0 reviewed. Requires Mac Plus or...

...998-9106. (Sept '87) H '86 Eddy [MF#784]

#### Multi-Ad Search

Multi-Ad Search lets you **organize** a customized database of as many as 32,000 graphics files. Can create thumbnail PICT images with...

...screen items, without extraneous pixels surrounding captured image. Images can be printed or saved immediately in bit- **mapped** paint, PICT, 24-bit-color, Clipboard, Scrapbook, or StartupScreen formats. Version 1.1 reviewed. \$59.95. Baseline...Version 2.31 shipping. Requires Mac II series with 2 MB of RAM and 8- or 24- bit - **video** card; hard-disk drive recommended. \$995. Dynaware USA, Inc., 950 Tower Ln., Ste. 1150, Foster City, CA...94041. 415-962-0195. (Nov '90) [MF#802]

Clipables: the EPS Graphics Library

Clipables is an enormous **collection** of EPS artwork. The 1,100 images are well drawn and cover a wide range of topics...

...Cliptures

Cliptures is a series of EPS clip-art packages comprising two business packages and one sports **collection**. Volume 2, Business Images 2, is the best **collection**. \$129.95 per volume. Dream Maker Software, 925 W. Kenyon Ave., Ste. 16, Englewood, CO 80110. 800...

...833-6687 or 415-961-4400. (Nov '90) [MF# 805]

Digit-Art

Digit-Art is an overwhelming **collection** of EPS clip art that's available on floppy disk or on CD-ROM. Comes with a...

...9410 or 403-262-8008. (Aug. '88) [MF#806]

Images with Impact!

Images with Impact! has several **collections** of superb, imaginative EPS clip art. The Business 1 package contains 175 images of people, equipment, and...

...0234 or 206-774-3518. (Nov '90) H '90 Eddy [MF#807]

MacGallery

MacGallery is a whimsical **collection** of MacPaint images that are ideal for children's publications, newsletters, and invitations. The 400 original illustrations...

...210, Tarzana, CA 91356. 800-525-1552 or 818-881-1997. (Aug '89) [MF#809]

Professional Photography **Collection**, Volume 1

This CD-ROM contains 100 color TIFF images that come in three formats: 24-bit...

...D fonts, a HyperCard stack for creating 3-D text, and more than a hundred 3-D **maps**, images of office equipment, and words and symbols commonly used in business presentations. Version 1.2.4...

...disk drive; color work requires Mac II series or higher with 2 MB of RAM. \$129.95; **Maps** I and II, \$250 each; Viewpoint **Collections** (Cars, Air & Sea, Anatomy), \$250 each. Macromedia, Inc., 600 Townsend St., Ste. 310W, San Francisco, CA 94103...

...drive; requires Mac II series or higher for color images. \$125 per category; CD-ROM with all **categories**, \$995. Totem Graphics, 6200-F Capitol Blvd., Tumwater, WA 98501. 206-352-1851. (Oct '89) [MF#812...]

...Publishing, Animal Kingdom, Special Occasions, Industrial Revolution, Island Life, and All the People. MacTut is a unique **collection** of ancient Egyptian artwork along with hieroglyphic fonts. Each volume includes ArtRoundup and Pattern Mover DAs. Eachskewing, perspective, and distortion capabilities; auto-dimensioning; area and perimeter calculation; auto-tracing of bit **maps**; and full-color support. Excellent complement to high-end PostScript programs. Creates and edits high-resolution bit **maps** to 2,540 dpi. Modular program design lets you install the features and tools you need. Supports...

...floor plans and elevations. Its built-in parts libraries and numerous sample plans (they come from four **separately** available libraries) make the job easy. Version 1.0 reviewed. Version 1.6 shipping. Requires Mac Plus

...

...Colors, and Styles). Can edit in Preview mode. Allows Pantone, spot, or CMYK process-color controls. Displays, **separates**, and prints 32-bit-color TIFF images. Compatible with OPI. Version 3.0 reviewed. Version 3.1...

...menu by showing all your fonts simultaneously, in multiple columns if needed. No scrolling is required. Correctly **organizes** font families. Can show fonts in any face and size. Trouble-free and performance is excellent.

Knapsack...382-4400.' (May '90) H '90 Eddy [MF#837]

World Class Fonts!

World Class Fonts! are bit- **mapped** screen fonts that come with three useful utilities, all the Mac the Knife fonts, and much more. Eight **separate** volumes are available. \$89.95 per volume. Dubl-Click Software, Inc., 9316 Deering Ave., Chatsworth, CA 91311...

...Easy-to-use, well-integrated interface allows multiple views and light sources, plus easy object editing. Surface **maps** can combine color, bump, transparency, reflection, and glow effects. Version 1.0 reviewed. Version 1.5 shipping...

...but speedy ray-traced renderings show detailed reflective surfaces, shadows, and transparency effects. Good PICT and texture **mapping**. Useful Preview mode. Resulting 24-bit PICT files are close to photo-realistic. Image-rendering process can...two volumes of prepackaged business forms include SmartForm Assistant. Volume I contains stockkeeping, production, sales, billing, and **collection** forms. Volume II has purchasing, receiving, accounting, disbursing, and personnel business forms. Version 1.0 reviewed. Version...simultaneously. Features excellent, precise typographic and color controls well suited to high-end prepress work. Can color- **separate** CMYK TIFF and Scitex CT files, but not RGB, TIFF, or PICT files. Version 3.1 reviewed...7 shipping. Requires Mac Plus or later and a hard-disk drive; gray-scale work requires 8- **bit - video** card and a compatible monitor. \$250. Fractal Design Corp., 335 Spreckels Dr., Ste. F, Aptos, CA 95003...Can save custom palettes and lets you define colors using RGB, HSB, or CMYK models. Has impressive **collection** of special-effects tools. Supports paint, EPS, TIFF, PICT, startup-screen, and SuperPaint 1.0 formats. Version...90) [MF# 931]

Galaxy

Galaxy is a universal patch-librarian program for MIDI synthesizers. When instruments are **organized** in a bundle, an ...The PacerForum package is a graphical-bulletin-board groupware system for your Mac LAN. For large, networked **organizations**, provides a convenient way to exchange ideas, files, graphics, and voice messages. Easy for novices to use...N. Technology Way, Orem, UT 84057. 800-451-5151 or 801-225-5000. (July '92) [MF#1029]

#### **Organizational Tools**

Acta 7

Acta 7 is an outliner application. Also comes with the Acta DA. Smart Paste...4th Dimension, is a simplified version of Control II, a heavy-duty system for sales-lead tracking, **order** entry, and invoicing. Control Classic concentrates on lead tracking and provides a clean interface, good automated planning...

...TX 75243. 800-223-2165 or 214-341-6711. (Feb '92) [MF# 1036]

Desk

Desk is a **collection** of seven powerful DAs: DeskPaint, DeskDraw, DeskWrite, DeskSecretary (appointment calendar), DeskCom (modem control), DeskCalc, and DeskFile (minidatabase...)

...network of custom-designed objects with connecting points at the centers, corners, or centers of sides. Customizes **organization** charts from text outlines. Version 1.1 reviewed. Version 2.1 shipping. Requires Mac Plus or later...

...a striking combination of outliner, data-base-manager, and spreadsheet-program features. An invaluable tool for capturing, **organizing**, and following through on project ideas. Version 1.0 reviewed. Version 1.1 shipping. Requires System 6...

...outliner, two graphics modules, telecommunications software, a database program, and a spreadsheet program with charting. Although the **separate** modules work well and are easily navigated, the level of automatic integration among them is almost nonexistent...

...is a useful and flexible idea processor. Allows creative, unstructured brainstorming with many options for project planning, **organization**

charts, flow charts, simple word processing, and even storyboarding for video and film. Version 2.02 reviewed...

...City, CA 95959. 916-265-0911. (Feb '92) [MF# 1044]

Org Plus for Macintosh

Org Plus creates **hierarchical organization** charts quickly, intuitively, and with a surprising variety of styles and formats. Nearly ...91) [MF# 1045]

QPID

QPID is a contact manager, based on 4th Dimension, that's ideal for **organizations** that need a single program to track prospects, clients, employees, and jobs. Automatically presents daily scheduled events...

...1000 Atlantic Ave., Alameda, CA 94501. 800-233-6851 or 510-769-7701.

(May '88) [MF#1051]

**Organizational** Tools/Personal-Info Managers  
Address Book Plus

This handy name-and-address manager works easily as application... address manager's interface resembles cards in a deck, with text entry permitted into fields in any **order**. A single card (record) can hold as much text as RAM will allow. Very fast. Lacks network...

...CA 93908. 800-359-4920 or 408-484-9228. (Feb '92) [MF#1064]

Rendezvous

This classy personal **organizer** has excellent printing abilities and useful and well-designed calendar, planner, diary, and to-do-list forms...

...1066]

Smart Alarms and Appointment Diary

Smart Alarms and Appointment Diary are two bundled DAs that provide **separate** electronic appointment books. Smart Alarms lets you set simple, reliable reminders for events (including recurrent projects), and...

...950 Parker St., Berkeley, CA 94710. 800-992-6656 or 510-549-1976. (Apr '91) [MF# 1069]

**Organizational** Tools/Project Planners & **Organizers**  
AEC Information Manager

This dedicated database program for managing project information is designed for use with MacProject...This integrated set of Excel macros and templates with HyperCard-based text makes creating business plans and **forecasts** relatively easy. Excellent manual. Version 4.0 shipping. Requires Mac 512K or later and System 4.2...

...89) [MF#1071]

FastTrack Schedule

FastTrack Schedule is a flexible Gantt-based project scheduler that uses a **hierarchical** outline format. Provides a high degree of functionality and excellent on-screen and printed-graphics abilities. Lacks ...

...schedule charts. Top-level chart objects work like buttons in HyperCard, revealing underlying details or even launching **separate** applications. Version 3.5 reviewed. Version 3.7 shipping. Requires Mac Plus or later and System 6...

...Ave., Agoura Hills, CA 91301. 818-991-6540. (June '91) [MF#1078]

MetaDesign

MetaDesign is a powerful **organizational** tool. Graphically depicts relationships among systems. Complex, detailed program. Version 1.0 reviewed. Version 3.0 shipping...

...Techniques is a technically sophisticated project-management system. Has full Gantt and CPM implementation, including all second- **order** slack and timing calculations. Doesn't make good use of the Mac interface. Version 4.0 reviewed is a quick, accurate program for **organizing** complicated work-shift schedules. Uses expert-system logic well but has a relatively crude interface. Data entry...

...242-0140. (June '92) [MF#1084]

Swing Shift

Swing Shift is a powerful HyperCard-based system for **organizing** complicated work-shift schedules. Has busy, complicated interface that obscures its many useful features. Handles as many...

...City, CA 91780. 818-287-5496. (June '92) [MF#1085]

TopDown

TopDown is a strong flowchart and **organization** -chart tool with a choice of connection modes for each individual line. Can generate text-based reports...and networkable. Produces bright, saturated transparencies. Printing on clay-coated paper produces dull colors. Colors come in **separate** ink cartridges. Resolution is 180 dpi, and the maximum printable area is 10.7 x 16.6...a format usable by ToolBook, a Windows hypermedia product. Has some conversion problems with scripts, icons, bit-mapped graphics, type fonts, sounds, XCMDs, XFCNs, and field numbers. Version 1.2 reviewed. Version 1.5 shipping...

...synchronized to speech or other sounds. But you can build interactive programs, using recorded sounds and bit- **mapped** graphics. Version 1.0 reviewed. Requires Mac Plus or later with 2 MB of RAM. \$499.95...ROM

Educorp CD-ROM contains approximately 600 MB of shareware, public-domain software, and demoware in 23 **categories** such as business education, music, and fonts. Version 3.0 reviewed. Version 6.0 shipping. \$199 (two...).

...ten million words) covering lots of up-to-date information. Innovative design includes many high-quality color **maps**, famous paintings, photographs, and digitized sounds. Version 1991 Edition 2.0 reviewed. Requires CD-ROM drive. \$395On-screen interactive **maps** can display country outlines, important statistics, and national flags; information on city locations and topographic elevation; geographic...5 reviewed. Version 1.3 shipping. Requires Mac Plus or later and ImageWriter or ImageWriter II; requires **separate** power supply for use with Mac II series. \$249. Thunderware, Inc., 21 Orinda Way, Orinda, CA 94563...recalculates formulas and totals when you pivot a report by interchanging columns and rows. Documentation is poorly **organized**. Version 1.03 reviewed. Requires Mac Plus or later with 2 MB of RAM and a hard...

...chart taped to screen or paper chart on digitizing tablet can also be used as template. Saves **extracted** numerical data in tab-delimited format. Has no automatic mode, but this simple DA is fast and...

...222-2215. (Nov '91) [MF#1240]

FlexiTrace

FlexiTrace automatically converts digitized chart graphics into numerical data. Saves **extracted** data in tab-delimited format. Handles line, column, area, and scatter charts. Charts are imported as scanned...

...selecting, copying, and pasting from other applications. Reads PICT files. To assure correct chart alignment before data **extraction**, clever plumb-bob tool rotates imported graphics. Easy-to-use tools and filters speed necessary process of...8320 or 617-577-8500. (June '92) [MF#1247]

MacCalc

This low-end spreadsheet program has good **data** -analysis tools. **Streamlined** user interface has good help and search functions but uses nonstandard rolling menus. Excel, MultiPlan, or Lotus...

...interface lets you select subsets of data before importing and can combine data from several sources. Includes **separate** program that correctly imports data from mainframe applications using fixed field lengths. Exports charts only through the...including Excel 3.0, WKS, WK1, DBF, DIF, SYLK, and text files using standard database delimiters. Proper **organization** of data before importing is crucial and may require expert assistance. Good documentation. Version 1.01 reviewed...

...shipping. Requires 2 MB of RAM and a hard-disk drive. \$795; Advanced Statistics, Trends, Table, and **Categories** modules, \$395 each. SPSS, 444 N. Michigan Ave., Chicago, IL 60611. 312-329-3300. (Nov '90) [MF...]

Version 3.0 shipping...W. North St., Egg Harbor, NJ 08215, (July '90)

Rendezvous 4

Rendezvous is a classy personal organizer with excellent printing abilities. Useful and well-designed calendar, planner, diary, and to-do-list forms. Lacks a...

...3.1 4

Smart Alarms 3.0 and Appointment Diary are two bundled DAs that provide separate **electronic** appointment books. Smart Alarms lets you set simple, reliable reminders for events (including recurrent projects), and these...

...Parker St., Berkeley, CA 94710. (800) 992-6656 or (415) 549-1976. (Apr '91)

\* PROJECT PLANNERS  
& ORGANIZERS

**AEC** Information Manager  
4

AEC Information Manager is a dedicated database program for managing project information. Designed for...

...of Excel macros and templates with Hyper-Card-based text that makes creating business plans and forecasts **relatively** easy. Excellent manual. Version 4.0 shipping. Requires Mac 512K or later and System 4.2 or...

...89)

FastTrack Schedule 4

FastTrack Schedule is a flexible Gantt-based project scheduler that uses a hierarchical **outline** format. Provides a high degree of functionality and excellent on-screen and printed-graphics abilities. A good...

...charts. Top-level chart objects work like buttons in HyperCard, revealing underlying details or even launching separate **applications**. Good hierarchical **nesting** capabilities, plus flexible control of connection or intersection of lines and symbols. Imports art for conversion to...Limited color, graphics, and printing capabilities. Useful spreadsheet and graphing tools. Interface complicated by too many hierarchical **menus**, which could be combined into dialog boxes. Tracks slipped start or completion dates. Version 2.5 reviewed...

...Limited color, graphics, and printing capabilities. Useful spreadsheet, and graphing tools. Interface complicated by too many hierarchical **menus**, which could be combined into dialog boxes. Tracks slipped start or completion dates. Can calculate financial information...

...Hills, CA 91301. (818) 991-6540. (June '91)

MetaDesign 4 1/2

MetaDesign is a powerful organizational **tool**. Graphically depicts relationships among systems. Complex, detailed program. Version 1.0 reviewed. Version 2.47 shipping. Requires...

...is a technically sophisticated project-management system. Has full Gant and CPM implementation, including all second-order **slack** and timing calculations. Doesn't make good use of the Mac interface. Version 6.0 shipping. Requires...

...Rouge, LA 70817. (504) 756-2322. (Oct '89)

TopDown 4

TopDown is a strong flowchart and organization- **chart** tool with a choice of connection modes for each individual line. Generates text-based reports. Excellent right...